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I.T. REVENUE

Doug Busch, Intel CIO, delivered \$184 million in value for his company last year.

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I.T. PRODUCTS

Steve Yates, USAA CIO, runs IT like a CEO, selling 200 products to 21,000 internal customers.

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I.T. MARKETING

Jim Burdiss, Smurfit-Stone CIO, boosts IT's credibility and transparency with annual reports and newsletters.

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[SPECIAL REPORT]

HOW TO RUN IT LIKE A BUSINESS

Governance. Customer service. Operations management. Financial controls. Applying rigorous business practices to IT is no longer a choice. For CIOs today, it's a matter of survival.

Page 48

Including: Exclusive CIO Survey

ROI for 47 business practices rated by
100 top-tier organizations Page 58

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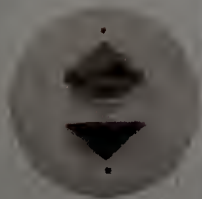
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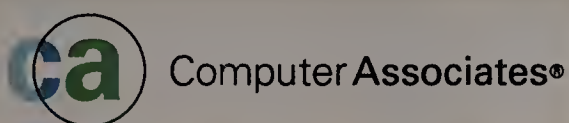


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In these days of powerful, highly complicated IT solutions, it's good to know there's a company now offering powerful, highly uncomplicated ones.

And, it's good to now know exactly who that is.

HOW TO RUN IT LIKE A BUSINESS

SPECIAL REPORT

ANALYSIS

What It Means to Run IT Like a Business | 48

Evolving from a cost center, IT is taking on the character, rigor and practices of a business within a business. It won't be easy, but for CIOs it's a matter of survival.

By Stephanie Overby

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CIO Research reveals the basic building blocks of IT as a business. *By Richard Pastore and Lorraine Cosgrove Ware*

MARKETING

The Secret Weapon: Internal Marketing | 62

Marketing IT's achievements will improve its alignment, create transparency and might even help win approval for your next \$2 million project. *By Alice Dragoon*

PROFILE | USAA

IT Incorporated | 74

USAA rebuilt IT as a for-profit subsidiary, turning IT services into products and IT employees into product managers. The dividends for the business have been great.

By Stephanie Overby



(Left to right) 7-Eleven CIO Keith Morrow, Washington state CIO Stuart McKee, and USAA Assistant VP Joe Thomas have gained credibility for the IT function by running it with businesslike discipline.



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Business Savvy



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Author Nicholas Carr and CIO Editor in Chief Abbie Lundberg go toe-to-toe on the strategic value of IT.

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"As IT has become cheaper and more ubiquitous, it has become harder and harder to use the technology itself as a competitive barrier because it's easier for competitors to replicate your systems," says Nicholas Carr, author of *Does IT Matter?*



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The best companies have the best business models because they have the best IT strategies. *By Don Tapscott*

PEER TO PEER Against All Odds | 44

A CIO who crossed the digital divide suggests how we can help others make the same voyage. *By David Guzman*

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Why are companies sacrificing long-term economic value to meet short-term targets? *By Gary Beach*

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CIOs needn't fear full exposure.
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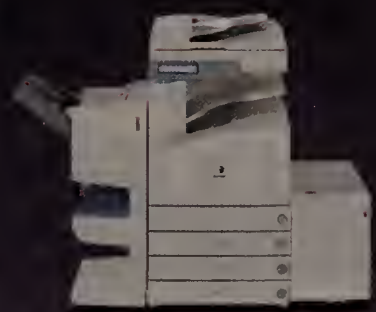


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ASK THE SOURCE

How Do You Run IT Like a Business?

Steve Yates, CIO. Oops, make that CEO. Yates is president of Information Technology Co., the wholly-owned IT subsidiary that serves the financial services company USAA. Since 1999, he has navigated the bumpy road of transforming IT into a business, overcoming resistance from IT staff and the business as well as corporate politics. (For the story on how he did it, see **IT Incorporated**, Page 74.) If anyone can tell you how to do it in your shop, Yates can. Go ahead: **ASK THE SOURCE** through May 15. Go to www.cio.com/experts.

READ MORE

How Do They Run IT Like a Business?

Senior Writer Stephanie Overby spent enough time with USAA's Information Technology Co. (ITCO) to bring back armfuls of charts and documents to help you analyze Yates' success. What's ITCO's org chart look like? Who's got what title and who

reports to whom? How does ITCO translate business risk into a P&L spreadsheet? How did ITCO do on our "How to Run IT Like a Business" survey? You can find these answers and more on the Web. Go to www.cio.com/ritlab to find links to these resources.

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» Get the complete results of CIO's research exclusive "How to Run IT Like a Business," which involved more than 100 IT executives at companies handpicked for their excellent IT reputations—survey results were used to compile the charts

in **The Best Best Practices** (see Page 58)

» Read a linked list of 40 CIO articles—The IT as a Business Reading List—to help you

» See sample pages from the annual report as well as the newsletter that the IT depart-

ment of Smurfit-Stone issues to its customers

» View sample pages from Merrill Lynch's IT services and products catalog

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Steve Yates, president of USAA's Information Technology Co.

GET THE ANSWERS

How Should You Run IT Like a Business?

Different business strokes for different folks. Maybe you're looking to increase visibility of IT value to the rest of the business. Or perhaps your focus is to zero in on improved customer service. Whatever your goal, our online **IT as a Business Profiler** can help you pinpoint the practices that will help you achieve your objectives. Answers are based on the 100-plus responses to CIO's survey "How to Run IT Like a Business," so you get directions that work. To use the Profiler, go to www.cio.com/ritlab.

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From the Editor



Our special report on running IT like a business continues online with an IT as a Business Profiler, a Reading List, samples of annual reports, brochures and catalogs from IT "companies." Find it all at www.cio.com/ritlab. (In case you're wondering, "RITLAB" is our acronym for Running IT Like A Business.)

Visible Courage

OF ALL THE BENEFITS INVOLVED in running IT like a business, the transparency of IT costs and value is the most potent. Unfortunately, it's also the most elusive. Less than half of the 103 CIOs who responded to our survey said they've achieved transparency (you can read all about the results of *CIO's* survey in this issue's special report, "How to Run IT Like a Business," starting on Page 48).

Transparency—having all IT costs, investments and ROI continuously tracked and visible to the entire enterprise—is certainly difficult. It requires a foundation of financial controls, a regimen of measurement and a program of communication that reaches into all levels of the enterprise.

But the hard work is worth it. Transparency is liberating. At Intel, instead of a panicky reaction when businessfolk question how IT is "spending all that money," CIO and Vice President Doug F. Busch can instantly refer them to the portal that details precisely what IT is working on, what IT is spending, how IT is prioritizing that spending and what the payback is to date. Satisfied?

You can just imagine the Cheshire cat grin on the face of any CIO able to respond to the spending police with that kind of information at his fingertips.

Transparency also empowers IT and business leaders to manage costs together to curtail unnecessary IT consumption. USAA, which runs IT as a subsidiary business, teams IT "product managers" with line of business leaders to actively manage

down technology consumption. For example, USAA's assistant vice president for banking systems noticed that the banking business unit was shelling out money for 1.16 PCs per employee, while the property and casualty business was managing fine with just .96. Together, IT and the bank devised a way for part-timers and shift workers to share desktops, dropping the bank's PC consumption and saving \$2 million per year.

Yes, achieving transparency requires a lot of effort. But it also requires courage—and this may be another reason why it's so elusive. Transparency exposes both the good and the bad about IT. Superefficient, well-aligned IT departments have no fear of transparency—they welcome it. But the rest are anxious about it.

The best answer I've seen for this natural reluctance comes from a CIO who values transparency even though his IT shop is not perfect—Robert Urwiler of Macromedia. "Your flaws are exposed. The opportunity is there to fail miserably and be very visible," he says. "But just like when you're running a business, you have to find a way to explain things that don't go right. And in the end, you find, the business appreciates being told the truth."

For me, this is the choicest bit of wisdom in the special report that follows.

Richard Pastore, Editor
pastore@cio.com

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InBox

Reader Feedback

OFFSHORING IS JUST A FAD

It's hard to believe that defense contractors would spend so much money attempting to send IT work offshore ("How to Safeguard Your Data in a Dangerous World," Jan. 15, 2004).

As a developer working in the trenches, I deal with offshoring on a continuous basis, and from my perspective, it's a fad. Offshoring has produced only mediocre code, involves little or no testing of the product, and generates a poor understanding of the requirements and little understanding of American culture. I spend a considerable amount of time reconfiguring code to get it to function; even when it does function, the design is poor. The reason that I'm still at work at 11 p.m. is because of poor offshoring work!

I believe that companies will give up offshoring in about three years. While I don't think all offshoring will fail, I do believe about 80 percent will. Do the industry a favor and take a look at the quality of products coming from offshore. This will be a true eye-opener for CIOs.

Erik Tornquist • erikltornquist@yahoo.com



A GOOD CONTRACT IS GOOD TO FIND

"You Sue, You Lose: The High Costs of Litigation" (Feb. 1, 2004) is right on the money regarding the need for well-thought-out contracts prior to entering into any major technology expenditure.

CIOs need to be directly involved in all technology-related contracts to ensure expectations are clearly outlined, management checkpoints and measures are clearly defined, and remedies are in place in the event things don't work out.

Everyone loses when technology expenditures are not prefaced with good contracts.

John Dana Smith
Assistant VP of IT, Advanta Bank Corp.
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WHY I.T. UNIONIZATION WOULD WORK

I read the letters in response to IT unionization in the Feb. 1, 2004, issue. IT workers are facing budget cuts and fear being outsourced. They are asked to work more hours for little compen-

sation and take the heat for failures—with little credit for successes. IT personnel are not looking for huge bumps in salaries. They want more personal time, fewer work hours, more respect and job security.

The IT group is asked to help every organization within the business. IT helps automate business processes to save costs. It helps streamline what were once tedious tasks. Through these efforts, IT has saved many companies money.

Business managers, however, continually overlook one thing: IT workers have gained knowledge of how the business works, which leads to a better understanding of the business. However, IT employees are not thought of as knowing anything about how business works.

Meanwhile, those same IT workers see the redundancy of processes and procedures. At the same time, more work is coming into the IT shops. And because these workers know the processes, they are able to apply efficiency. But their budgets are being cut, they're being asked to work more hours and are in

fear of being outsourced.

So what value would unionization have to the business? IT gains a seat in the decision-making process. IT gains the political might to help influence change to correct redundancies and waste within business processes. IT may become appreciated by those who want to make the company more profitable. And, they also gain more personal time.

As a result, you've cut costs and made IT employees happier, thereby increasing the chance of retaining them longer, translating to an even better understanding of the business and increased productivity.

Ken Robinson, IT Manager
phoenix@internetstatic.com

VALUE OF VENDOR REFERENCES

As the former CIO of Southwest Airlines, I agree with Jerry Gregoire on his points about becoming a poster child for any vendor ("Sweet Deals or Bitter Meals," Feb. 15, 2004). CIOs usually have more to lose—their people's time, and their own time and reputation—

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than gain in this area. I would never let my company be used as a reference until we had successfully implemented a particular product and had good vendor relationships. We also screened each request. I cannot remember ever losing any discounts by not agreeing to become a "visible" reference.

Of course, there are always exceptions, and CIOs must evaluate each request. In some cases, advertising that you have used or implemented a product can help in recruiting battles for skilled people. For example, if we were newly implementing a particular technology or product and needed to hire several talented people, we might take a more visible role in being a reference to help in recruiting.

Of course, the opposite holds true if a company was known for having talented people in a particular technology. We

would downplay or refuse to be a reference so that we would not be raided by other companies needing that talent. I usually pay attention to a CIO or company reference only if I know the CIO or people in the company well and can trust that I will get both sides of the story about the product and vendor.

Ross W. Holman, *Founder and President*
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I'm on the vendor side of the equation, having just joined a startup after leaving my previous company (purchased by

Mercury Interactive). When I left, 33 percent of the company's reference base came from my area. Rarely did I give additional discounts for those who agreed to be references. Your statement was pretty fair: Spend the extra effort and you'll get the discount without being a reference.

My goal was and still is to set an expectation and beat it—that's how you get customers who will be references.

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What Do You Think?

Send your thoughts and feedback to letters@cio.com. Letters may be edited for length or clarity. For a link to the articles mentioned, go to www.cio.com/printlinks.

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CORRECTION

We incorrectly reported Dennis Callahan's title in "Bursting the CMM Hype" in the March 1, 2004, issue. He is the executive vice president and CIO of Guardian Life Insurance. We regret the error.

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trendlines

the NEW the HOT the UNEXPECTED

Edited by Michael Goldberg

WIRELESS APPLICATIONS

Text Message to Düsseldorf 5-0: He Went That Way

German police enlist mobile phone users to transmit tips

GERMAN COPS are calling them the best new weapon to hunt down crooks: mobile phones.

More than 75 percent of Germany's 85 million-plus inhabitants own a mobile phone. Many of them are taxi and bus drivers, delivery people and others who professionally spend a lot of time on the ground. More so, in fact, than the country's police force. That's why Germany's cash-strapped government has turned to its mobilized citizens for help in tracking down suspected criminals, fugitives and even missing persons.

In what is believed to be the first service of its kind in the world, citizens over 16 years old can now register with the Federal Office of

Criminal Investigation (known as BKA) to become a volunteer mobile-phone cop.

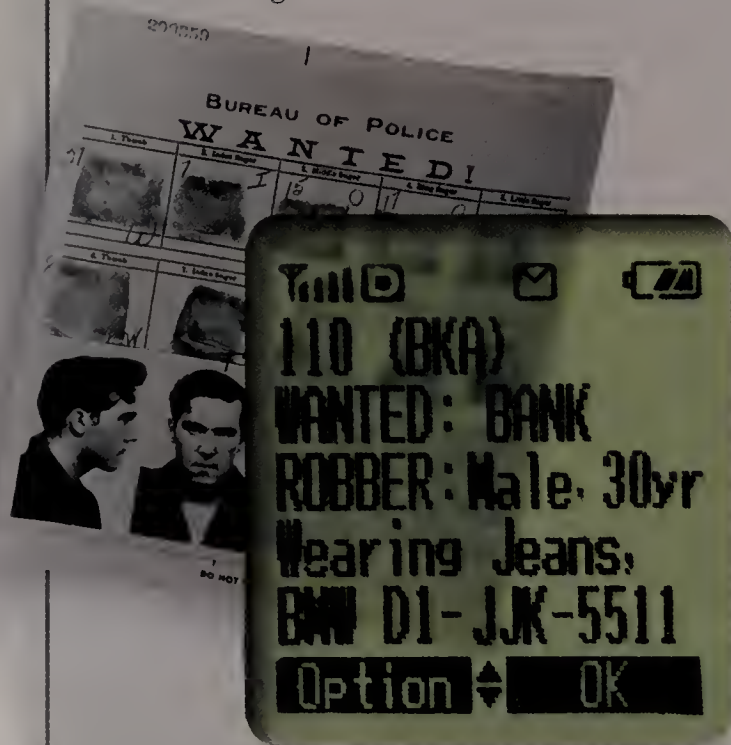
The service is based on registered volunteers receiving a brief SMS (or short message service) message on their mobile phones from the police and calling back if they spot someone. A typical message could read: "Police searching for bank robber, male, approx. 30 years old, wearing jeans, black leather jacket, driving black BMW sedan, Düsseldorf license number D-JJK-5511. Dial 110 with information."

Before launching the SMS search service, the German Interior Ministry authorized pilot tests for more than a year with police departments in 10 cities. The results were overwhelmingly positive, according to Interior Minister Otto Schily, who in February approved a nationwide rollout of the service.

In a country battling rising crime—up 2.3 percent in 2002 over 2001—Schily says the new method could significantly improve crime-fighting by enabling public-minded citizens to search for criminals or missing people. His logic: the more eyeballs snooping, the better the chances of catching crooks.

Interested citizens can register to become SMS-enabled spotters on the Internet by going either to the BKA webpage (www.bka.de) or directly to the special police SMS search portal (www.sms-fahndung.de). Here they find general information about the service and their role in the process, in addition to the registration procedure, which is purportedly simple and quick.

Continued on Page 26



INNOVATION

Voice Recognition Without the Voice

AND NOW, from the people who gave you the I-mode Internet phone, we bring to you a speech-recognition system so revolutionary that it is, in fact, speechless. NTT DoCoMo showed the prototype system during a rare tour of its Yokosuka, Japan, R&D center.

The system uses electromyography, or EMG, to measure the electrical activity in facial muscles used when a person speaks. Mouthing the words without sounds means the user of such a system could communicate in a noisy room.

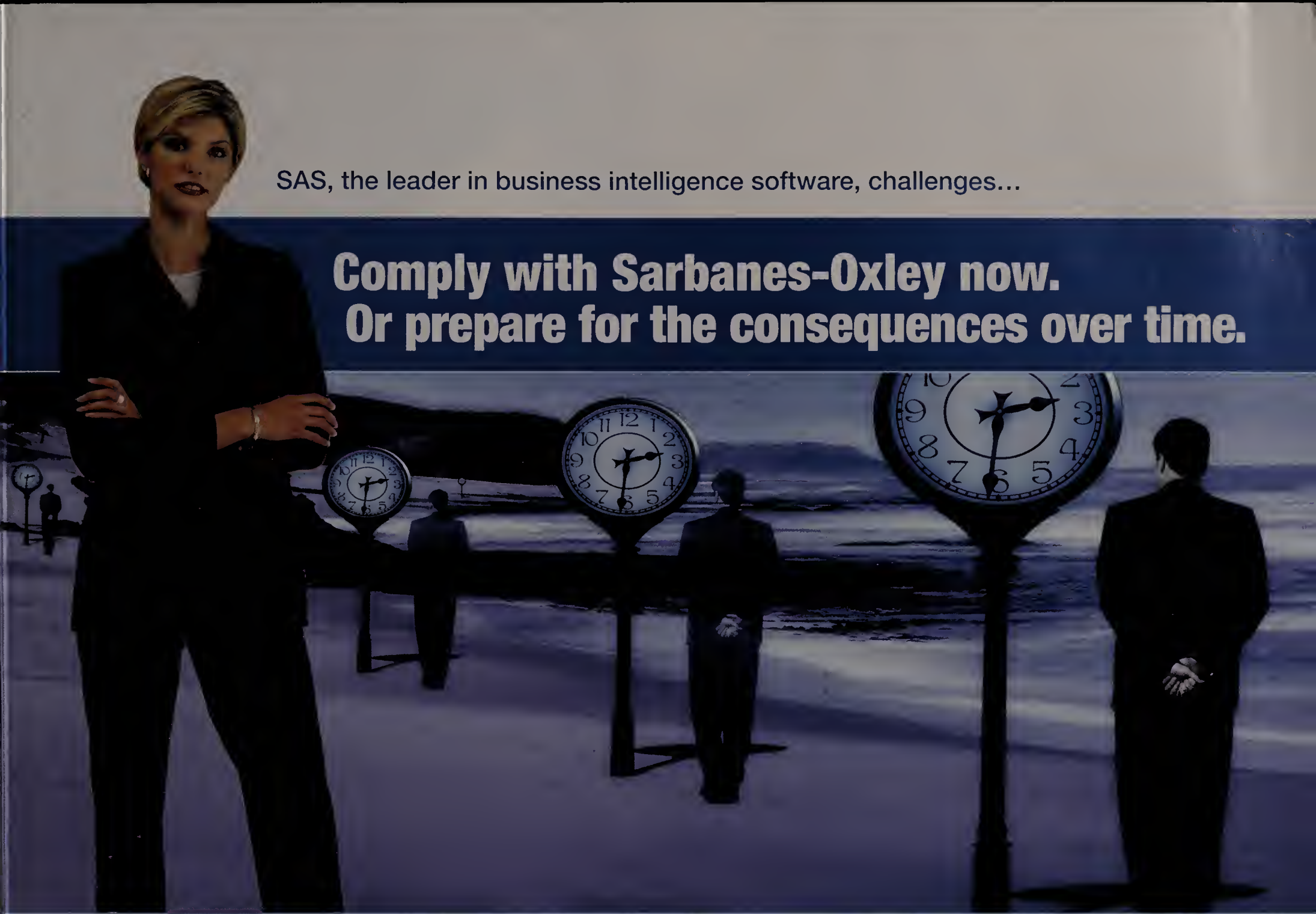
For the system to work, three electrodes have to be touching certain areas of the face to measure the electrical activity. In a demo, a user had sensors mounted on his thumb and first two fingers (see photo). The thumb was placed under his chin, the forefinger was held vertically touching his cheekbone, and the second finger held just above his top lip. This strange pose doesn't impede the mouthing of words.

After three years, the prototype can recognize the five Japanese vowels. Developers are also working on other languages, says Tomoyuki Ohya, director of NTT DoCoMo's Multimedia Signal Processing Lab. But first, they have to tackle Japanese consonants.

—Martyn Williams



Sensors record muscle twitches on researcher's face to demonstrate voiceless speech recognition.



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I. T. M A N A G E M E N T

More CIOs Checking Out Best-Practices Library

AS FAR AS British imports go, the IT Infrastructure Library (ITIL) may not be as big as the Beatles. But the methodology is gaining adherents among CIOs who want to better manage the quality of the services they deliver.

ITIL, which was developed by the British government and is now under the aegis of its Office of Government Commerce (www.ogc.gov.uk), comprises a set of best practices for IT service management, addressing such areas as service delivery, service support, service-management implementation, infrastructure management, applications management and business perspective.

In the United States, interest in the library has grown steadily. Corporate and individual membership in the IT Service Management Forum (www.itsmf.net), for example, has increased from 50 members in 1998 to about 15,000 individual members, and attendance at the group's conferences is increasing by 25 percent each year, says spokeswoman Cynthia Hamm. (The forum meets next in Long Beach, Calif., from Sept. 22 through Oct. 2, 2004.)

One of ITIL's most popular features among CIOs is its use of service-level agreements (SLAs)

to ensure that IT and its clients have a mutually agreed-upon way to deliver and monitor the quality of service. Steve Bittinger, a Gartner research director, says IT groups that were pressed to cut costs and sign SLAs find the library useful. "ITIL provides a starting point for process definition for those organizations whose internal processes may need improvement."

Paper-products giant MeadWestvaco is about six months into an ITIL initiative that James McGrane, CIO and vice president of enterprise information solutions, hopes will help information technology personnel understand the role they play in a process-based organization. "We're working out service-level agreements with our business partners," he reports. "They can use these clear

metrics to judge our performance."

For his part, McGrane is a big proponent of focusing on processes—rather than raw technology—to gain efficiency. "I believe in process work. In effect, you're managing outcomes—not tasks. Disciplined processes allow us to introduce change into the organization and become more agile." —Tracy Mayor

The British IT Infrastructure Library is gaining fans among American CIOs who are using it as a benchmarking resource.

From the Stacks

The following excerpt on the lifecycle of an incident of service support comes from the IT Infrastructure Library's book *Service Delivery* (published by The Stationery Office). It demonstrates the process-oriented approach to dealing with an end-user's complaint of sluggish Internet access:

» A User calls the **Service Desk** to report the online service is delayed.

» **Problem Management** examines underlying causes and calls in capacity management. Service-level management is alerted that the service-level agreement has been breached. Request for change raised if appropriate.

» The **IT Financial Management** process assists with the business-case cost justification for any upgrade.

» **IT Service Continuity** gets involved in the change management process to ensure recovery is possible onto current backup configuration.

» The **Release Management** process controls the implementation of the change by rolling out replacement hardware and software.

» The **Availability Management** considers the hardware upgrade to ensure that it can meet the required availability and reliability levels.

» The **Configuration Management** process updates the configuration management database throughout the process.

Text Message

Continued from Page 24

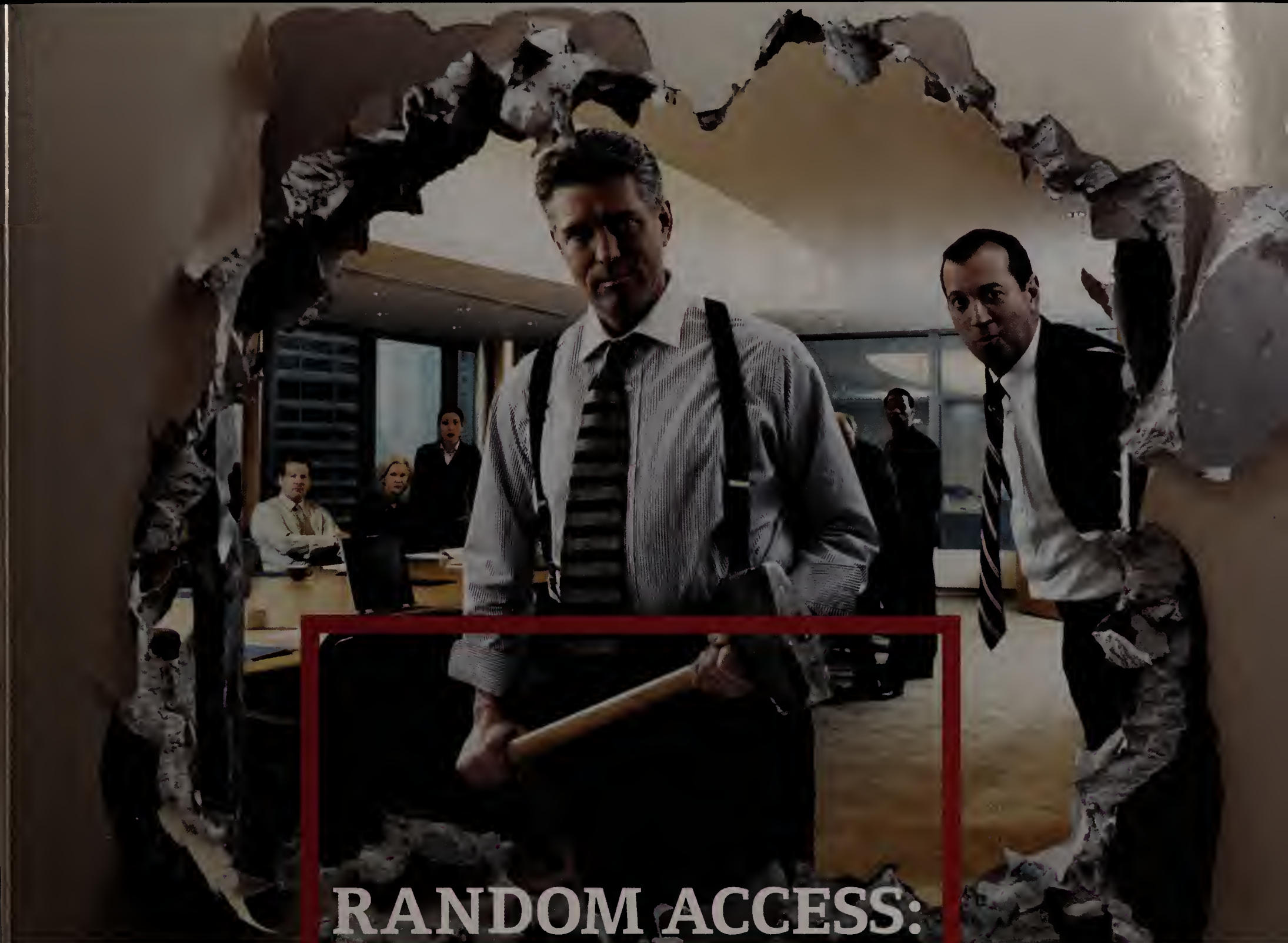
But for civil libertarians, it's not so simple. The registration process requires everyone to provide personal data, including occupation and passport number, which the police reserve the right to check for security reasons. The new police-sponsored SMS search service comes to a country that has a sad history of notorious snoopers—Hitler's

gestapo and the former East German stasi. Even some members of Schily's own Social Democratic Party told the German international broadcasting service Deutsche Welle that they fear the new mobile-phone snoop service could encourage citizens to spy on their neighbors.

Defending his decision, Schily says the "speedy and direct involvement of citizens enables new forms of cooperation between police and the population." He says that because German law allows for public

searches only in cases of "heavy criminal offenses," the police will send out SMS searches only in such cases.

Should the snooping service establish itself as a regular feature in police work throughout the country, a next step could be the use of camera phones so citizen volunteers can receive mug shots. Photos carry more data than SMS messages, which typically are limited to 160 characters. Is it too Orwellian to imagine a volunteer receiving a mug shot of himself? —John Blau



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On the Move

By Meridith Levinson

ChevronTexaco CIO Finds Smooth Transition to Consulting

After sticking with one company for 30 years, CIO Dave Clementz briefly struck out on his own before landing at EDS

DAVE CLEMENTZ fancies himself a “pathfinder.” He says he takes pride in charting new turf. And for most of his 30-year career, Clementz found fertile ground at ChevronTexaco to plant and cultivate the seeds of transformation and innovation. But in May 2003, Clementz felt that the soil had dried up. After laboring over the integration of the two companies that merged in October 2001, Clementz says he found himself in a spot with nowhere to grow. He says ChevronTexaco’s board appointed “some very talented young people” well-positioned to run the company, and “they were perfectly happy to keep me on the ranch, doing what I was doing as CIO,” he says of his colleagues at ChevronTexaco. “But it was clear to me that I wasn’t going to be doing much else with the farm, so I decided to find another path.”

Within a month of announcing his retirement, Clementz set up his own consulting firm, Silver Eagle Partners, in September



Dave Clementz

2003. (A numismatist, he took the Silver Eagle dollar coin as his consultancy’s name.) His first engagement was to help EDS with its turnaround. (EDS was one of his suppliers at ChevronTexaco.) Three months into the work, Clementz was offered a job as executive vice president of service delivery at the Plano, Texas-based outsourcer. It took him just 24 hours to accept.

Many CIOs in transition start their own consulting gigs as a way to stay engaged with the industry and expand their experience base—often with the hopes of finding better professional prospects, says Dan Getman, vice president of recruiting with Sheila Greco Associates. Charlie Feld, the former CIO of Delta Air Lines and Frito-Lay, whose consulting company the Feld Group was acquired by EDS in January 2004 (and who’s now Clementz’s colleague); Tracy Austin, CIO of Mandalay Resort Group; and John Reece, former CIO of the IRS, all branched out on their own at one time or another during their careers. But EDS is an

interesting choice, given its recent history of layoffs, a \$1.7 billion loss posted in 2003 and an SEC investigation into its contract to build an intranet for the Navy. Clementz downplayed the risks associated with joining the company and cited four reasons for accepting the job offer.

He liked the previews. Consulting gave Clementz an insider’s look at precisely what was going on inside EDS. He knew what to expect if he took a job there.

Consulting has its headaches. After decades effecting change on the front lines, giving advice from the sidelines that others could debate and dismiss was a tough adjustment for Clementz. He thought he could be more effective and had a better chance of EDS heeding his advice if he joined the company and had some skin in the game.

He found a kindred spirit. Before Clementz accepted the EDS offer, he asked with whom he’d be working. EDS introduced Clementz to Feld. Clementz says meeting with Feld was like hanging out with a best friend. “He was finishing my sentences, and I was finishing his. We had been traveling on separate journeys for 30 years, but our journeys were very similar,” says Clementz. Meeting Feld was the clincher for Clementz. Had Feld’s team not been involved at EDS, Clementz says he would have had misgivings about taking the job.

He relished a new challenge. “This is what I do,” thought Clementz as he mulled the transformation facing EDS and his decision to join the company. He saw similarities between what EDS was going through and the changes he had helped lead ChevronTexaco through during his three-decade tenure, and he thought he possessed valuable experience. Clementz also says he was motivated by the element of risk inherent in the decision. “There is certainly risk, but it’s a calculated risk, and there’s a huge upside. I didn’t take the assignment thinking I would fail. I took it knowing I would succeed because of the people I’m working with and the firm that I’m a part of,” he says.

NEWS OF OTHER MOVES

The Virginia Information Technology Investment Board tapped **Lemuel Stewart Jr.**, president of consultancy Executive Partners, to be state CIO for a five-year contract. He will oversee a \$500 million annual IT budget. Florida Gov. Jeb Bush appointed **Foyt Ralston**, the state Technology Office chief of staff, to be acting CIO. Ralston succeeds **Kimberly Bahrami**, who resigned as CIO in February and returned to the private sector. Ohio Gov. Bob Taft tapped **Greg Jackson**, formerly assistant director of the state Department of Administrative Services, to oversee the state’s new Office of Information Technology as the state’s first cabinet-level CIO. **Doug Elkins**, Arkansas director of information systems, received a promotion to state CIO. He replaces **Carolyn Walton**.



Bahrami

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GOVERNMENT I. T.

IT Master of the Senate

U.S. Senate's CIO focuses on customer support, security



J. GREG HANSON, the U.S. Senate's first CIO, has 100 bosses. Hanson, a former chief software engineer with the Air Force, and his 250-person staff support 100 senators, their staffs and a multitude of committees. He also must keep some 12,000 computers across the country functioning—even after unexpected incidents, such as the office evacuation prompted by the discovery of the poison ricin in a Senate mailroom in February. CIO Senior Editor Todd Datz interviewed Hanson at a recent technology conference for Senate staffers.

CIO: What are your top priorities?

J. Greg Hanson: To develop a strategic IT plan, and develop a two-year rolling plan with at least a one-year refresh. To do that correctly, I'm going to need to do a business process [and IT systems] review. Each senator has a little IT staff and an IT infrastructure, and the secretary of the Senate has an IT staff, and each committee has one. So a top priority for me is going to be, get consensus from all the stakeholders on the things we can agree upon and build a technology-strategic plan going forward.

Another top priority: Complete the work on developing robust communications systems and information systems to support security and continuity of government operations. What happens when they find ricin and have to evacuate all the Senate buildings? This is what happened [on Feb. 2]. One night I find out they're closing all the Senate office buildings. We had to

set up satellite offices in a variety of places for senators' staffs and extend the IT infrastructure into those areas so they could function. During the ricin incident, the Senate stayed in session 100 percent of the time. Business didn't stop; it was inconvenient, but it didn't stop.

Also customer service. The first thing I did when I came onboard was a comprehensive customer satisfaction survey. The reason we're having this emerging technology conference [is that] they rated us the very lowest on rolling out technologies fast enough. So I want to take what we've learned from the survey and act on it, to get better at communicating. I do a monthly newsletter now, it's kind of a project report every month.

What are your biggest challenges?

This organization is so complex. It's an enterprise of enterprises. You have to make Senator X

happy and make him and his staff feel like you exist to serve him. You also have to make Senator Y happy. Sometimes these guys have differing agendas, differing ideas. At the bottom of all that, you have to provide a basic core set of services—infrastructure, telecom, networking. Take e-mail. I can provide the infrastructure and the servers, but their systems administrators run the servers. And their systems administrators shepherd over the data. I don't look at that data. I don't have access to it. I don't even have passwords to their servers.

You get up to 8 million probes a week on your networks. Tell us more about security.

Hackers are a huge concern. We do information assurance and information security at all levels, starting from inside with each systems administrator responsible for his own little network. Throughout the Senate network switches and out to the firewalls and outside, we have intrusion-detection and sensory devices and things like that. I have an infosec shop that works for me, and I may like to beef that up.

I have almost 12,000 installed users all over the country. So when a virus propagates, there's potential for real mischief. But here's where the challenge comes in: I can send a patch to a systems administrator, but I can't make him patch. He's got to want to patch. It is a challenge. But fortunately most of them are very technically savvy, and more than that, they're extremely dedicated. They care about nothing but the welfare of their senator and their office.

Every time there's a big virus, it only takes about two hours before *The Washington Post* calls me, saying, "How many of your systems are down? How fast is it spreading?"

SECURITY

"No" Vote on Stata Center

NOT EVERYONE AT MIT is thrilled with the state-of-the-art Stata Center, set to open this month. It's not the Frank Gehry design, however, that bugs Richard Stallman, founder of the Free Software Foundation and a researcher at the university. It's the security system. At night,

Stata Center visitors will need to use an RFID proximity card to enter. This choice incenses Stallman.

"There is no legitimate justification for keeping track of who opens these doors," Stallman says. "You can just leave these doors open, and the building would have the

same amount of security as most of the rest of the campus." MIT says most buildings use the RFID cards.

Stallman says that MIT could have implemented a different system that protected the visitors' privacy. Instead, he says, the Institute chose only convenience, and he's ready to call it a day and take his research elsewhere. "The big sacrifice is leaving MIT," he says. "I am prepared to make that sacrifice." —Thomas Wailgum



Richard Stallman



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Off the Shelf

Edited by Carol Zarrow

Legal Advice

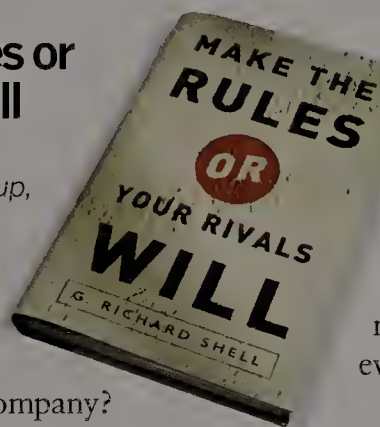
Two books plead the case that ignorance of the law can be either costly or self-destructive—or both

Make the Rules or Your Rivals Will

By G. Richard Shell
Crown Publishing Group,
2004, \$27.50

WHERE WILL hard work combined with a good product and business plan get a company?

Next to nowhere, unless the people in charge learn how to exploit the legal and legislative systems their business operates in. This decidedly un-Horatio Alger-like philosophy is the foundation for Wharton Business school professor G. Richard Shell's argument that skill in using the law for competitive advantage is a requirement—not an option. Executives who disdain the legal playing field, he says, place their companies' fates into rival hands. In *Make the Rules*, Shell introduces the legal tactics that confer competitive advantage (but not before attaching the disclaimer that many of these



tactics are, in fact, unethical and that his educating readers about their use is no way an endorsement). He identifies five factors—legal merit, public legitimacy, strategic position, financial resources and access—that ultimately decide who wins and who loses in a business clash and traces these factors through every imaginable business situation.

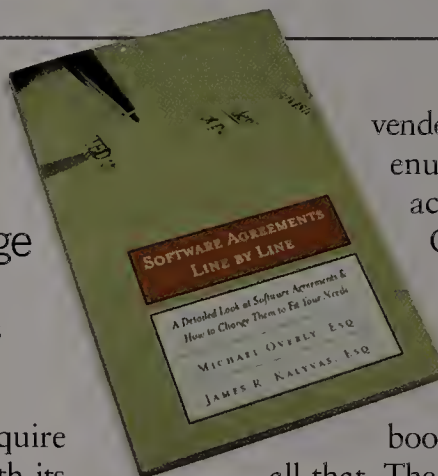
Stories of successful legal maneuvering by businesses appear throughout. Highway weigh stations, it turns out, are the result of a successful 1950s campaign by the railroads to slow down their freight-hauling rivals. Who knew? This is an easy to read and often fascinating account of how the powerful got and stay powerful. Readers are guaranteed to come away more politically savvy. The only downside of the author's message is that except in the case of large, financially solid companies, there isn't much room for optimism: Those with power will always use it to keep others from joining their ranks. —Ben Worthen

Software Agreements Line by Line:

A Detailed Look at Software Agreements & How to Change Them to Fit Your Needs

By Michael Overly and James R. Kalyvas
Aspatore Books, 2004, \$49.95

TO SUGGEST that you shouldn't acquire this book based on some quibble with its style or tone would be akin to telling a man dying of thirst to turn down a glass of water because it's tepid. As the authors (both attorneys) rightly point out in the beginning, software licensing has long been about



vendors maximizing revenue and minimizing accountability, while CIOs have stood by and even resisted taking an active role in changing that fact. This

book sets out to change all that. The authors offer up a sample vendor agreement in the first chapter, then use the rest of the book to show CIOs how to tweak, edit and otherwise twist that agreement to their favor.

Software Agreements is graceless in the

best possible way. There's nothing stylish or judgmental about it. Anecdotes amount to hardly more than a sentence or two, and even then they're simple litanies of facts: Here's a contract provision. Here's why it exists. Here's how to rework it. The book amounts to a logical collection of rules, complete with examples of line-item-edited contracts. Overly and Kalyvas have produced a tight little reference book that could do for CIOs wrestling with basic software agreements what Strunk and White's *The Elements of Style* does for writers wrestling with prose.

You're thirsty. Drink. —Scott Berinato

CIO Best-Seller List

The Five Dysfunctions of a Team: A Leadership Fable
By Patrick Lencioni
Jossey-Bass, 2002

The 21 Irrefutable Laws of Leadership: Follow Them and People Will Follow You
By John C. Maxwell
Thomas Nelson, 1998

Now, Discover Your Strengths: The Revolutionary Program That Shows You How to Develop Your Unique Talents and Strengths—And Those of the People You Manage
By Marcus Buckingham and Donald O. Clifton
The Free Press, 2001

Execution: The Discipline of Getting Things Done
By Larry Bossidy and Ram Charan
Crown Publishing Group, 2002

Good to Great: Why Some Companies Make the Leap...and Others Don't
By Jim Collins
HarperCollins Publishers, 2001

SOURCE: Jan.-Mar., 2004 data compiled by Borders Group, Ann Arbor, Mich.

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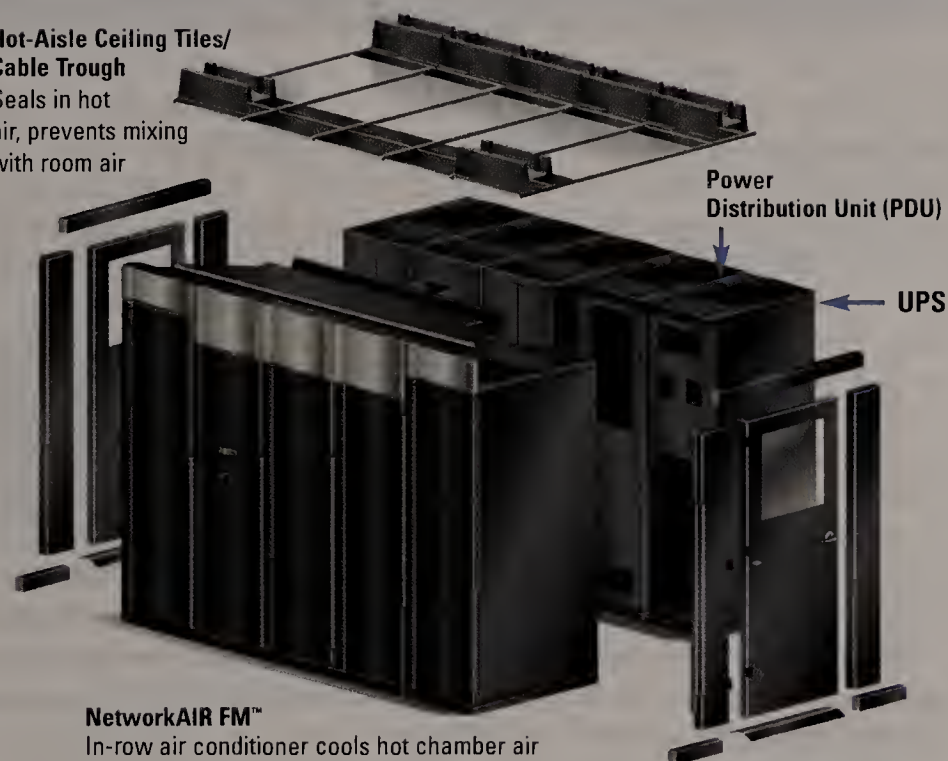
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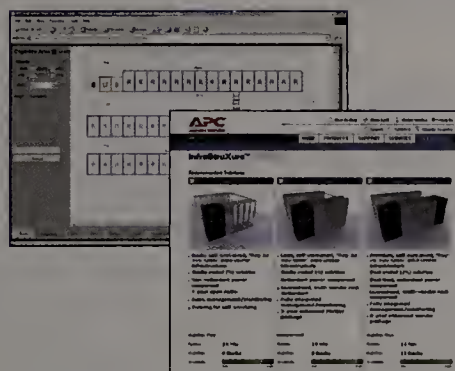


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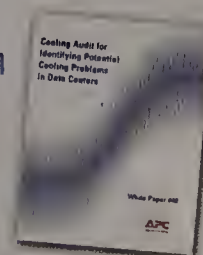
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Oliver Rist, Senior Contributing Editor;
 Brian Chee, Industry Expert
InfoWorld, 3/12/2004

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DIGITAL MEDIA

Miami Arts Center Enlists Techies to Enhance Design

NEW STAGES call for grand entrances. This being 2004, the people in charge of building Miami's new Performing Arts Center (PAC) decided they should integrate digital-media technology into the art deco complex now rising in the city's downtown to enhance the experience of patrons, boost revenue and provide tools for the artists.

Acting on this vision, PAC officials enlisted the help of the MIT Media Lab. In exchange for a \$100,000 contribution from the PAC Trust to the university, the MIT Media Lab created a semester-long graduate course whose sole focus is to study how cutting-edge digital technology can be made part of the Miami arts complex. The course, described by MIT as an intensive design experience, began in February. Two professors and 15 MIT and Harvard University students from a variety of fields (architecture, design, digital media, visual and performance arts, online software and cultural policy) visited the construction site. "They took thousands of digital pictures," says Gail Eaton, marketing director at PAC.

The students' charter is wide—"to explore innovative models for integrating media technology into every aspect of the

performing arts and public space," according to the course description—and their canvas is big. The PAC will have a 2,480-seat hall for ballet and opera, a 2,200-seat symphony hall for classical and pop music concerts, a smaller 200-seat theater and a large open-air plaza. Its total cost is estimated at \$344 million, of which \$255 million is going toward construction costs.

"The idea is to challenge these creative, bright young minds to think deeply for a semester about how a performing arts center might incorporate the digital age in its design and planning," Eaton says.

What might digital art bring to this scene? The students told *The Miami Herald* their early ideas included visions of a concert director conducting an orchestra remotely, while a holographic image of him is beamed at the podium where he would be standing; and the ability to download into a PDA an expanded event program. PAC officials will field these ideas and decide which ones to develop.

"We see enormous potential for education, program development and marketing," Eaton says. "We want the audience to feel that through the technology they can become part of the creative process."

—Juan Carlos Perez

This Date in IT History

Jobs Loses Job

May 31, 1985

After launching an unsuccessful coup to take back the reigns of the company he cofounded, Steve Jobs is summarily stripped of his duties at Apple by CEO John Sculley. It was Sculley who, ironically, Jobs had lured away from PepsiCo with that now famous question, "Do you want to spend the rest of your life selling sugared water or do you want a chance to change the world?" According to The Apple Museum, just days before, with Sculley away at a meeting in China, Jobs plotted his move to oust Sculley. Alas, a worm inside Apple leaked Jobs's plan to Sculley, who had just enough time to ask other top execs if they wanted Jobs or him. They took Sculley, and Jobs, who retained the chairman title, was merely a paper tiger. With no worlds left to change at Apple, he eventually left Apple in September.

The apple, however, would not fall too far from the tree as Jobs returned in a smaller capacity in early 1997—Apple would buy his NeXT Computer company—and was grandiosely named iCEO (for interim) later that year. During his absence, he had also become CEO of Pixar, cultivating the little-known animation studio into a movie moneymaker. Finally, in January 2000, Jobs was formally reunited with his former CEO title.

—Thomas Wailgum



Jobs

I. T. RECYCLING

PCs Are a Terrible Thing to Waste

WHO CAN RESIST a new PC? With falling prices, replacing your PC is more attractive than upgrading. What's the harm?

A recent United Nations University (UNU) study into the environmental effects of PCs, however, found that around 1.8 tons of raw materials are required to make the average desktop PC and 17-inch CRT monitor, roughly equal in terms of weight to the total amount of materials used to produce a

midsize car. "It's a big problem," says Eric Williams, a researcher at UNU Tokyo and one of the study's coauthors. The UNU report issued in March recommends upgrading a PC's memory or storage space before replacing it, and if the machine has to go, donating the old computer.

There are some encouraging signs. PC maker Dell has seen a big increase in the number of machines it receives from customers for refurbishing, says

Tod Arbogast, senior manager of Dell's Asset Recovery Services.

According to Arbogast, Dell has handled millions of machines since 1992 when it started offering its asset recovery service, which costs around \$25 per machine and includes collection, transportation, reporting and, for PCs, destruction of data on the hard drive. Around two-fifths of Dell's commercial customers participate.

Whatever you choose, though, Williams says that you should act quickly. "The longer it sits in your closet or desk, the less value it will be to you and whoever will be getting it."

—Martyn Williams





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Keynote

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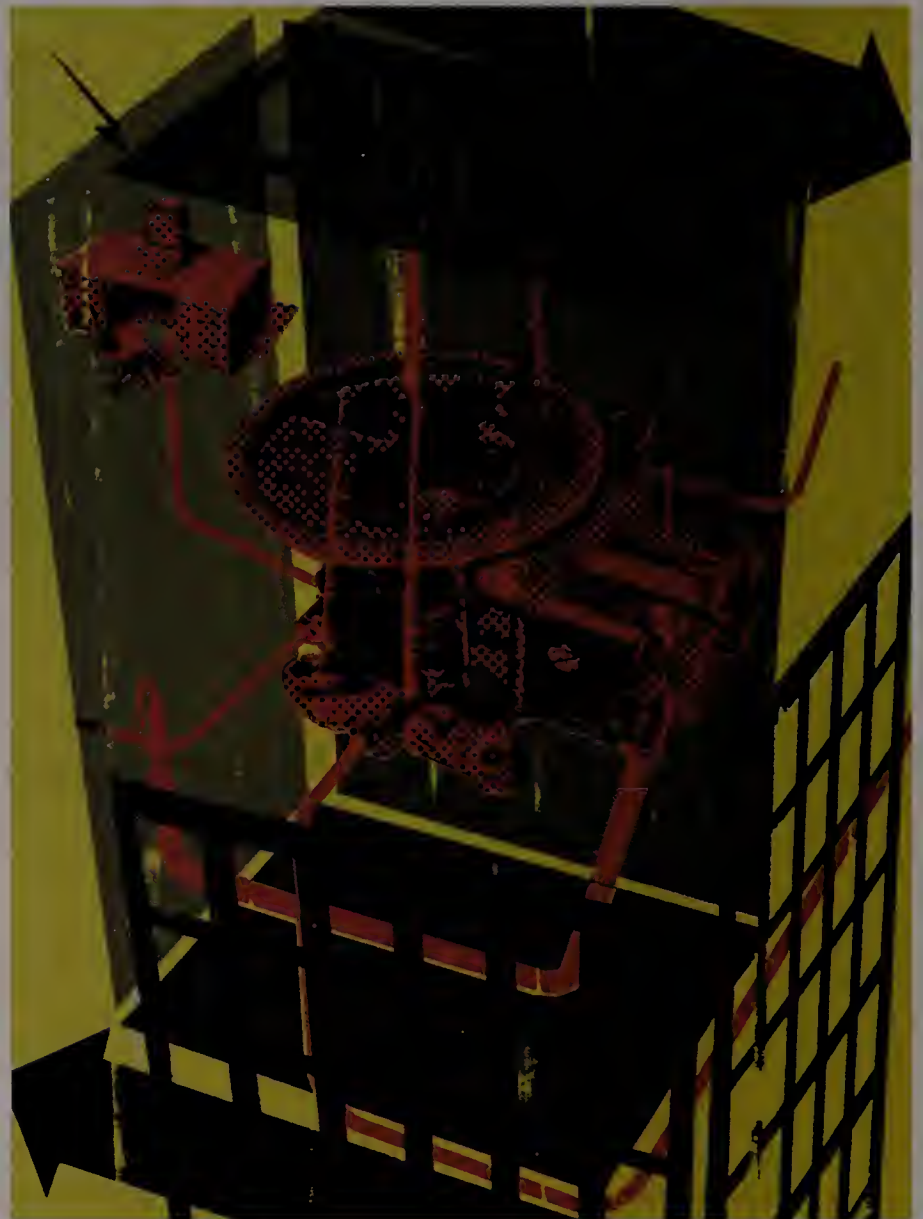
BY DON TAPSCOTT

NICHOLAS CARR IS ONCE AGAIN grabbing center stage now that his new book, *Does IT Matter?* is hitting the bookstores. The book is essentially an expanded version of his provocative *Harvard Business Review* article in which he argues that IT has become a commodity—necessary for competitiveness but insufficient for advantage.

Carr argues that, in the past, companies such as American Airlines, FedEx and American Hospital Supply built their own proprietary systems to differentiate their offerings or lock in customers. Now that IT has become a commodity—a pervasive infrastructure—any company has access and any system can be instantly replicated. And therefore, he argues, any competitive advantage goes out the window.

Trouble is, his newly improved argument, like his original paper, is fundamentally wrong. Companies that heed his advice—don't spend; follow, don't lead—are doomed to mediocrity or worse.

To begin, his core thesis is not supported by facts. There were no halcyon days of proprietary IT



competitiveness as he describes. I've been advising companies since 1975, and looking back, I can testify that there were only a handful of stories that demonstrated how companies used IT to radically change their business models. Rather, in the era of data processing, companies used IT for mundane purposes—to automate old business processes like accounting and HR. Systems targeted at competitiveness were rare, very expensive and took years to build. Proprietary systems benefited vendors more than users, as companies were locked into their computer vendors. Software was not portable, and vendors made gross margins of more than 80 percent on hardware.

Successes like American, FedEx and American Hospital Supply are legendary precisely because they were so rare. For every success story where companies used IT to compete, there were countless failures. At nearly all companies, IT mattered lots, but not to achieve competitive advantage. Carr's rewrite of

CIO Editor in Chief Abbie Lundberg interviews author Nicholas Carr—and puts his theory to the test—in "The Argument Over IT," Page 84.

ILLUSTRATION BY TAVIS COBURN

EN



I I I I I

Office manager escapes clutches of desk



"At last I'm free, thanks to Nokia Mobile Connectivity solutions...and it feels great," exclaims Mary Langer, office manager.

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history makes for a good read—but only if you enjoy fiction.

Today the positive examples are actually much more plentiful. Even when it comes to dotcoms and Internet pureplays, many early innovators are competing well today, which undermines Carr's assertion that "the technology cycle works

Companies that heed Nicholas Carr's advice—don't spend; follow, don't lead—are doomed to mediocrity or worse.

against pioneers." For sure, the early Internet companies with bad business models failed. Yet, household names like Amazon.com, Ameritrade, CheckFree, DoubleClick, eBay, E-Trade, Google, Salesforce.com, University of Phoenix Online, Yahoo and even Priceline—to name a few—have highly distinguished business models and are growing rapidly in revenue and earnings.

More important, Amazon.com, Best Buy, Tesco and Wal-Mart dominate their respective retail markets—enabled by superior IT, customer relationships, business designs, differentiated offerings and other benefits.

The same is true for many other industry competition leaders: banking (Citigroup), consumer credit (American Express), consumer food products (PepsiCo), household (Procter & Gamble and Colgate-Palmolive), furniture (Herman Miller), communications technology (Cisco), property insurance (Progressive Casualty Insurance), metals (Alcoa) and hotels (Marriott). Of *Fortune's* recent top 10 most admired companies, eight are well-known for their superior use of IT in supporting a unique business strategy—Dell, FedEx, GE, IBM, Microsoft, Southwest Airlines, Starbucks and Wal-Mart.

Why You Can't Take the "I" Out of IT

With the actual evidence refuting his view, it's tempting to say that Carr's elegant thesis works well in theory but not in practice. Digging deeper, we see why it doesn't work in theory either.

The problem starts with Carr's definition of information technology. In making the case that IT has become a commodity, Carr's original definition includes data and information. He argues that "it's hard to imagine a more perfect commodity than a byte of data—endlessly and perfectly reproducible at virtually no cost."

In fact, nothing in the universe is as diverse as a byte of data, which can carry information ranging from baby pictures to a digitally signed million-dollar bank transfer. It's like saying that Shakespeare's works are a commodity because he uses the alphabet just like everybody else. As many critics of Carr's view have pointed out, nothing is more scarce than the right infor-

mation at the right time.

Now, having retreated from that view, he's redefined IT as "all the technology, both hardware and software, used to process and transport information in digital form...this does not encompass the information that flows through the technology."

This is astonishing. If you exclude "information" from "information technology," surely we can all agree that IT doesn't matter in competitive advantage or in anything else! It's all about the information.

Superior IT enables superior information—a resource that rivals superior talent in competitive differentiation. High-performing business models are also based on superior information.

Smart Hardware Cannot Be Commoditized

Carr further weakens his position by arguing that IT does not include the growing technology embedded in consumer products. In doing so, he conveniently eliminates one of the most important emerging waves of IT innovation and differentiation. The Internet is becoming the Hypernet—a term my colleagues and I use to describe truly ubiquitous broadband and services-based computing. The physical world is becoming smart and networked. The PC is being eclipsed by millions (and soon billions) of new information appliances. These include customized PDAs for warehouses, couriers, physicians or patients in drug field trials—either custom built or as generic appliances that can be integrated into a new system—many of which constitute scarce resources and are not easily replicable. More important, thousands of new product categories are emerging: digital televisions, automobiles, fire extinguishers, assembly lines, doors, clothing and coffee cups. All are becoming IT appliances. Every company has a historic opportunity to integrate IT-enabled services into its products. These devices are part of the future IT hardware, differentiating otherwise commodity products to lock out competitors.

DoCoMo I-mode went from zero to 30 million customers in just two years. In this case, a phone company understood that it could enrich its product—a simple wireless telephone—with IT services such as interactive games, shopping and other entertainment services. The result is a profitable juggernaut that is even now taking transaction revenue from banks. The Hypernet changes our concept of hardware. Of course, PCs, servers and storage technologies have become commoditized. But it is false to say that all hardware has become commoditized.

Carr is right to suggest that software has shifted considerably from being a proprietary resource to a purchased good that leveled the playing field. But he underestimates the customization required and the ensuing opportunities for distinguishing a company. Many companies today are implementing massive software projects that are hard to reproduce, using packaged software from companies like Oracle, PeopleSoft and Siebel.

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SAP, for example, has more than 2,000 customers. But Ed Tobin, the CIO of Colgate-Palmolive, says that “not one of them is using it the same way. It’s all about how you embed a package in the business.”

And what about Web services—which Carr says will further commodify software? Evidence to date suggests the opposite. This revolution in software is changing the Web from a medium for presentation of information (that’s what HTML was about) to a computational platform. Yes, the Net is becoming an infrastructure—but a programmable one! This will create infinite opportunities for custom software development, new business design and competitive differentiation. Software companies in the future will build components—enabling their customers to deploy custom functionality.

True, Web services may enable competitors to more easily reproduce technology innovations. But it also enables companies to create software faster. Carr looks at only one side of a double-edged sword—the dark side. But the new technology lets companies get to market faster with business innovations. Yes, the speed of the competition is accelerating and competitors are trying to catch up. This is the new normal. Companies need to be more agile. Get used to it!

Market leaders grab positional advantage through a combination of IT and business design, and then others have no choice but to follow in their wake.

Similarly, ubiquity is also a double-edged sword. Of course technology is more pervasive now than in the past. But this creates new opportunities as systems and new business models can scale instantly. Whereas in the past, American Hospital Supply had to purchase and roll out terminals and build complex, risky networks, today companies like eBay or Tesco can reach millions of customers instantly. It took Amazon.com only three years to build one of the most successful retail companies in the world. And its customers paid for the “terminals” and the “network.”

Amazon.com and eBay don’t have proprietary terminals in our homes or offices. So if competitors can easily replicate this technology, why haven’t they succeeded? Basically, we’re all locked in by the power of their software applications and business models. It seems the cost for us to switch to another competitor is prohibitive. And no competitor can touch these companies, because of their installed base. They have each created a new “proprietary” resource—the resilient power of IT-enabled relationships.

At the cusp of each wave of tech innovation, market leaders seize advantage, whether as early adopters or fast followers. They grab positional advantage through a combination of IT and business design, and then others have no choice but to follow in their wake. This happens anytime there are new waves of tech innovation.

How IT Drives Business Model Transformation

The heart of Carr’s problem is his inability to grasp the role of IT in the new business designs that enable competitive advantage.

In a classic case of one step forward, two steps back, Carr’s book now accepts the notion that an effective business model can be the basis of competitiveness. This is progress. But he stubbornly denies the role IT plays in creating these new models. He suggests that investments in technology by industry leaders like Dell, JetBlue and Wal-Mart are marginal to their success. For example, in the case of JetBlue, he writes, “the source of that advantage lies not in the technology but in the business model.”

But IT and business models are not discrete factors in strategy; increasingly, they are inseparable. IT is leading to profound changes in business design—not just to new business

processes but to the deep structures of the corporation. Because IT and networks radically reduce internal transaction costs, companies can conduct business in real-time. My research shows that smart companies can speed up their metabolism and build high performance into their business designs.

Most important, IT is slashing transaction and interaction costs between companies. The upshot is that partnering is becoming more cost-effective than performing many business functions internally. The vertically integrated corporation is unbundling, and companies can now focus on what they do best and partner to do the rest in what I’ve called “business webs.” Leading companies grow by focusing on their core—that cluster of activities where they have unique capabilities and where they create true barriers to replication. The evidence is clear: Companies that forge high-performance business webs tend to have better products, lower cost structures and better profitability than their vertically integrated counterparts.

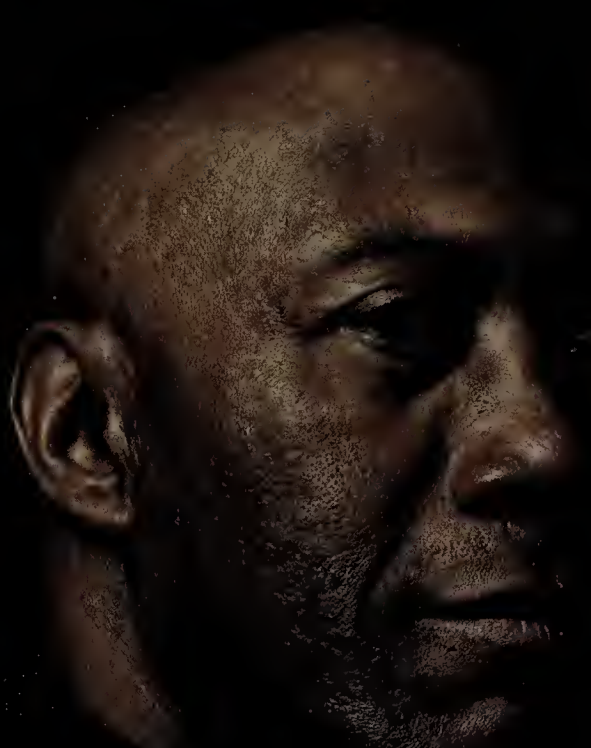
But Carr specifically attacks the business web in a lengthy section of the book titled “In Praise of Walls.” In a thinly veiled defense of vertical integration, he creates a classic straw man and labels myself and others as the “post-company school.” Apparently, we believe that the corporation is no longer the “fundamen-

Share Your Opinion

By now, you’ve read enough of Nicholas Carr’s opinions on IT. And now you’ve got Don Tapscott’s opinions on Nicholas Carr’s opinions. What are yours? Go to the online version of this article, and scroll to the bottom to **ADD A COMMENT.**

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Keynote

tal unit of commerce" and that it is being replaced by "amorphous, loose groupings of companies." Allegedly, we "jump to the conclusion that companies will naturally get smaller." In supporting "the death of the company," we suggest that managers should not "keep their own company's interests foremost."

A quick reading of my work would expose this interpretation as a fanciful distortion. Of course the corporation remains the basic unit of commerce; it's the vertically integrated corporation that is failing. Some of the hundreds of business webs we studied are loose couplings, but most are not, having very tight integration of their business processes. Focused companies that orchestrate business webs are not smaller; they tend to have faster revenue growth and better prospects.

Take the furniture industry as an example. Herman Miller has orchestrated a high-performance business web. The best design talent—industrial designers who no furniture company could hire—are brought into the company's business web to

Companies that successfully alter their business around IT can achieve a significant window of competitive advantage.

ensure innovative designs. Herman Miller's distribution channel is an IT-based network of partners who customize furniture for consumers. And the company increasingly outsources manufacturing to companies that can do a better, cheaper job—again exploiting the power of the Net. The tonic of the marketplace is brought to bear on many business functions that traditionally have been shielded from the market by corporate walls. In Herman Miller's case, the results are clear—dramatically better products, revenue growth, net profit margin, ROI, revenue per employee and inventory turns compared to key competitors. (And they also have better IT.)

Companies can also achieve advantage through IT-enabled relationships in which customers are brought into the business web. Tesco is a food retailer in the United Kingdom that has created an online grocery shopping experience that exploits the effectiveness of its supply chain systems. Customers love it, and the business is profitable and growing.

It is true that as the Net becomes a powerful infrastructure, and as new standards enable rapid deployment of applications, some technology innovations can be brought to market and replicated faster. However, it's not so easy to do all the really hard work that makes a system advantageous to a company such as changing business processes, organizational structures, culture and human behavior. The corporate graveyard is strewn with the bodies of those who naively thought it was easy to

change a culture. Launch a business innovation or new business design based on IT, and the biggest challenge for your competitors to replicate will be the changes you made to your business, not the technology that inspired them. Companies that successfully alter their business around IT can achieve a significant window of competitive advantage.

Carr's Blueprint for Failure

This is not just an academic debate. The post-dotcom world, a tough economy, and considerable C-level cynicism about IT and innovation in general provide fertile ground for Carr's perspective. The trouble is, some companies might actually implement his recommendations—spend less; follow, don't lead; focus on vulnerabilities, not opportunities. Taken together, this is a blueprint for failure.

In some situations, it may make sense to be a follower to keep up and achieve competitive parity. But in others you should try to be a leader—not necessarily a big spender, but a leader where it counts. Many followers have tried hard to displace the competitive leaders I have discussed above. Most have failed.

As for spending less, evidence is strong that services-oriented architectures, intelligent information networks, adherence to standards, autonomic systems, virtualization and database consolidation (to name a few) provide a basis for IT cost reduction. But do this as part of a strategy for more effective IT. Cut fat, not your company's nervous system.

Finally, manage your vulnerabilities, but focus on opportunities—not just for IT but for innovative business models enabled by IT. Think like Maple Leaf Foods, a company investing in a system that will provide supermarkets and consumers with detailed information about the history of a piece of meat, ensuring safety and quality. The program is based on new technologies including tools for DNA tracking. Transparency and accountability throughout their business web from farm gate to plate will help the company differentiate its products.

Ultimately companies face a choice. They can innovate in IT—a resource still in its infancy—to enable new business designs that help them differentiate in the market. Or they can yield to the pressures and cynicism of a difficult business environment. Punishment is already proving swift for those who make the wrong choice. **CIO**

Don Tapscott has written 10 books about technology and business strategy and is the president of Toronto-based New Paradigm Learning Corp. He is currently launching a research project titled "Information Technology and Competitive Advantage in the 21st Century." He can be reached at don@tapscott.com.





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Field-Tested Ideas from CIOs for CIOs

Against All Odds

A CIO who crossed the digital divide suggests how we can help others make the same voyage

BY DAVID GUZMAN

THE DIGITAL DIVIDE has been a public issue for nearly a decade, but the gap appears to be widening. We are quickly becoming a society of digital haves and have-nots, with large differences in access to computers, software and content. This should be of concern to everyone who believes in maintaining a democratic society. But for me, it is a personal issue.

Born at the edge of a tropical rain forest in Puerto Rico, I came to the Northeastern United States with a family of migrant farm workers, and grew up in the urban barrios of Paterson, N.J., and East Harlem in New York City.

Blessed with maniacal tenacity, I was driven to change the circumstances of my birth. As an eighth grader, I looked old enough to work the graveyard shift in factories in Northern New Jersey and continued to work from midnight to 8 a.m. through high school. Eventually, I transferred from the public schools to a parochial school in Passaic, N.J., where I worked as a janitor after school, cleaning the toilets to pay for my tuition. I took college classes, often walking as much as 12 miles to class. I played varsity baseball, as well as basketball and football. Somehow on three hours of sleep, I was able to maintain excel-

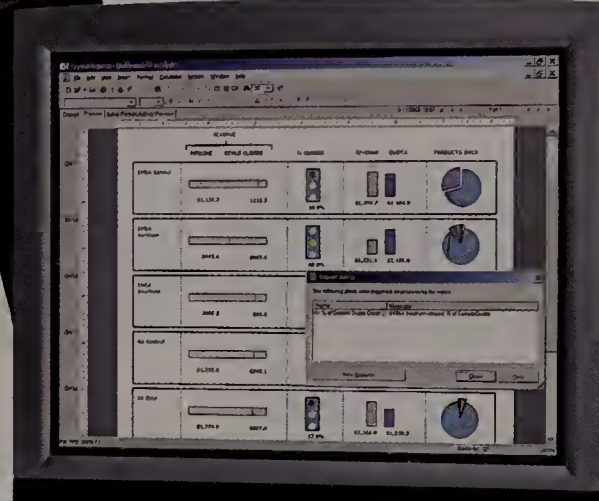
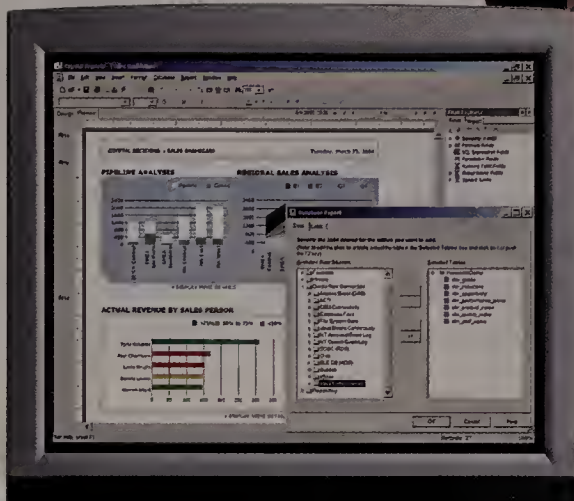
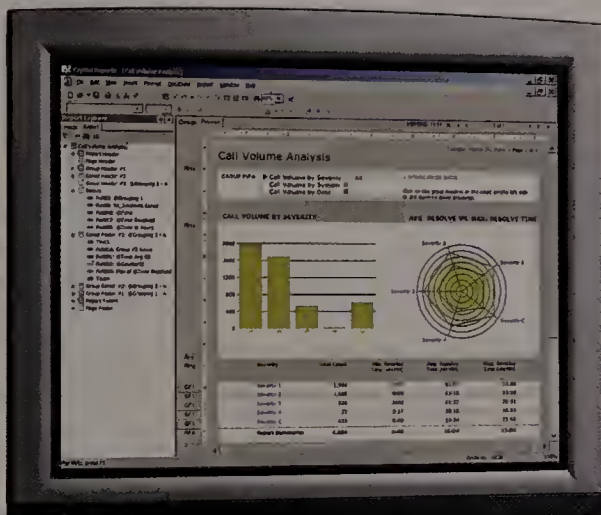


lent grades and score well on standardized tests. Along the way, I managed to impress people of influence who wrote glowing recommendations for college. By the grace of God, these combined factors allowed me to acquire a first-class education at Yale, which made an extraordinary difference in my life.

After graduating from Yale, I began my work career at Morgan Stanley on Wall Street in a unique two-year management training program. It was there that I became fascinated with technology. I continued onward, with six years on Wall Street, five years of management consulting at Deloitte & Touche, and increasing responsibility roles in technology at a number of Fortune 100 companies. I worked for Federated Department Stores, Office Depot, Alcoa and as CTO at Kmart; and ultimately became CIO at Owens & Minor, a Fortune 500 health-care distributor based in Richmond, Va.

Of course, technology was not a significant differentiating

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factor when I attended college in the mid-1970s; personal computers were rare then, and were just beginning to have a major impact in the business world that I entered in the early 1980s. But that is no longer the case today. Computer literacy is a must for any child who enters the world with a lack of advantage and dreams of achieving success in business or any career path.

Yet the divide continues to widen. In fall 2000, the Department of Commerce published statistics that showed that about 78 percent of households with annual incomes of \$75,000 or more had access to the Internet, while only 13 percent of households with annual incomes of \$15,000 or less had access. Despite the intense growth in Internet usage, these facts are

nology is the fourth basic literacy—after reading, writing and arithmetic. He points out that to succeed in the classroom, workplace, home or community, students need to know how to efficiently find, use, manage and evaluate information resources so that they can create and effectively convey information and ideas. As a significant harbinger, ETS is considering standardized testing for computer literacy.

All aspects of life are changing fast, requiring technological dexterity. For example, the group of kids that sees the first showing of a new movie often determines its fate. As they are leaving the theater and even during the movie, they e-mail, instant message and call their friends on cell phones with

reviews that either make a movie a hit or doom it. Forget professional reviews, these peer reviews are much more influential. Of all the skills to be developed in the coming century, the single most differentiating factor will be technological literacy.

My children now enjoy a life of privilege. Every member of my household owns a PC at home with broadband access to the Internet. In a model program, the public schools in my neighborhood assign each child an individual laptop computer and allow access to the Internet. The innovative part of this program is that the majority of people who benefit are low-income, and the high tax base in the affluent portions of the neighborhood help fund the program. But most inner-city public schools do not have such innovative programs. I can view my children's homework assignments and grades online. I exchange e-mails with my children's teachers. I send instant messages to my children and receive immediate answers. (It sure makes planning the family dinner a lot easier!) But more than that, it gives my children a chance to compete on an equal level in an increasingly technological world, and more important, it helps the low-income children in my neighborhood compete as well.

Given my own early childhood experiences, I look at my children with pride. My work with the Friends Association for Children is satisfying, and the volunteer work I have done throughout my life gives me a measure of personal satisfaction. But I cannot ignore the looming tragedy that the digital divide bodes for our society. I urge all who read this to consider how they can personally work to eliminate the digital divide. Government, business, charitable organizations such as Friends, and individuals like you and me can all make a difference. For me, after all, it is personal. **CIO**

David Guzman is CIO of Owens & Minor, a leading distributor of medical and surgical supplies. He can be reached at david.guzman@owens-minor.com.



We need a national head-start program for computer literacy so that children from low-income families can cross the digital divide.

not measurably changing. In July of 2002, the "Snapshot" report from the Annie E. Casey Foundation Kids Count Program showed that only one-third of households in low-income, central city neighborhoods had computer access.

Moreover, as computers become more ubiquitous, schools vary enormously on how well they integrate computers and access to the Internet into the classroom. Nationwide, we see an emerging gap between connected and well-connected kids. In high-income families, according to one study, school-age children watch less TV, spend more time online and get better grades. So on one side we have kids with high-speed Internet access at home and plenty of computers in classrooms, and on the other, kids who must share a handful of computers in the school lab.

Placing computers in classrooms is essential, but it is just the first step. Technology must become an integral part of teaching and learning in all our schools.

A positive example is the Friends Association for Children in Richmond, Va., a nonprofit organization that focuses on getting preschoolers excited about technology. Under the visionary guidance of John Purnell, Friends concentrates on providing an educational head start for children from low-income families with music, Spanish and technology classes to enrich the curriculum. I am personally involved with this program, and I would like to see this kind of head start for computer literacy adopted nationwide. It will take money and will. But it can and should be done.

Early exposure to technology is critical. We cannot tackle the digital divide too late in a child's personal evolution. Kurt Landgraf, CEO of the Educational Testing Service, says that tech-



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[SPECIAL REPORT]

HOW TO RUN IT LIKE A BUSINESS

Evolving from a cost center, IT is taking on the character, rigor and practices of a business within a business. It won't be easy, but for CIOs it's a matter of survival. BY STEPHANIE OVERBY

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I.T. INCORPORATED

How insurance giant USAA manages its IT business within a business

>>

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busi-ness

n. The buying and selling of goods and services, especially on a large scale.

You can't throw a rock in technology circles these days without hitting some soul sounding off about the importance of running IT like a business.

But what does it mean to “run IT like a business”? It sounds logical. It sounds beneficial. And for many, it sounds like just another in the long line of ill-defined catchphrases that the IT community latches onto to no avail.

But this one is different. It's not a flavor of the month; it's a mutual mandate from the CEO, the CFO and the CIO. This one will turn IT from a credibility-damaged cost center into the aligned business partner it needs to be—and always should have been. But only if IT leaders understand what it really requires.

In this special report, we explain what it means to run IT like a business, and analyze how CIOs are doing it. We'll draw insight from a new in-depth *CIO* survey of more than 100 organizations selected for the study because of their exceptional IT reputations. For these CIOs, running IT like a business is the defining principle for IT functions reborn in the post-Internet-bubble recession. We learn why they're doing it, why it's so difficult and why it's worth the effort. We identify the most prevalent practices and determine which deliver the greatest ROI. Among these are internal IT marketing, which turns out to be the secret success factor for running IT like a business. We cap off the report with an up-close examination of how one exemplar (financial services company USAA) reinvented IT as a business within the business.

To explain the concept, it's important to clear up some misconceptions.

1. It's not all about finance. "It's about instituting common business practices in IT," says Robert Urwiler, vice president and CIO of software company Macromedia. "It's more about corporate governance and responsibility than it is about sending out invoices to your customers."

2. It doesn't necessarily mean incorporating the IT department. Though some organizations operate a profit and loss IT subsidiary, most don't. And they don't need to. The IT department is already positioned to act like a business within a business. The only major difference between IT and a typical business is that instead of revenue going in and profit coming out, IT receives funding and delivers value, says Meta Group Executive Vice President Howard Rubin.

3. It's not just another IT quality initiative. This goes way beyond a Capability Maturity Model-level rating or Six Sigma status. "CIOs are figuring out it's not so much how IT is done that really makes the difference," says Michael Gerrard, vice president and chief of research for IT management at Gartner. "It's additional competencies like product development and management and financial capabilities that make the difference." Not to mention IT operations, supplier and human resources management, customer focus, marketing and governance.

It's about institutionalizing all these business functions and processes in a manner compatible with the larger corporate culture.

And it's about time.

AN OBLIGATION, NOT A CHOICE

Years of being viewed as overhead and run as a cost center—exacerbated by technology hype and unfulfilled expectations—have pummeled IT's reputation. "If we behave as a cost center, we won't get the most benefit from IT, and we certainly won't earn credibility," says Doug F. Busch, CIO of Intel.



At Intel, CIO Doug Busch spent four years crafting a business focus for IT, starting with customer account management.

The sheer size of technology budgets demands more prudent management. "If you look at how much money IT spends here, we're the equivalent of a billion-dollar business. We have the *obligation* to run IT like a business," says Busch.

It's not just the magnitude of the budget, but the influence that IT has throughout today's enterprise that demands a new way of operat-

ing. CEOs and boards of directors have taken note of their dependence on IT, and they will no longer tolerate IT operating by its own set of rules, as a mysterious black box with no apparent business discipline or accountability.

And CEOs are increasingly wise to the alternatives at their disposal should IT fail to measure up. "If your IT department can't do this internally, the business is going to say, 'We



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might as well outsource,' and you'll be forced through the keyhole," says Joe Gottron, executive vice president and CIO of The Huntington National Bank. "One way or another, IT *will* be a business."

NUMBER-ONE BARRIER: TIME

Once people grasp its meaning, running IT like a business might not sound so difficult. In fact, if you look at the individual practices (see Pages 60-61) that survey respondents employ, there doesn't appear to be much new under the sun: sound project management methodologies, regular strategic planning meetings, customer satisfaction surveys, financial audits—the list goes on. But mastering a handful of practices won't cut it. CIOs must put multiple processes in place, each buttressing another, and manage them in a rigorous and repeatable manner.

This is new territory for IT, which is why it's so hard. "Businesses measure themselves on financial numbers, on customer satisfaction," says Rubin. "If you look at the history of IT, for years, there wasn't process management in place, there weren't quality measurements or product measurements. Huge pieces were missing. For CIOs, it has been like trying to run a business before the invention of bookkeeping."

Thus, it takes time—buckets of it—to reconfigure IT as a business. That is the number-one barrier to success, say survey respondents. At Intel, Busch first focused on establishing good customer account management. Then came the cost accounting discipline. Then measuring the business value of IT deliverables. Now he's focused on optimizing those practices. It's been four years and counting.

It's an unnatural evolution for most departments, says Mark Popolano, CIO of financial services giant AIG, where he has been playing Darwin for the past six years. "What we ended up doing was a series of changes: standardization, setting up a proj-

5 TOP MOTIVATORS

1. Lack of IT credibility: **58%**
2. Operational ineffectiveness: **55%**
3. Overwhelming backlog and demand for IT services: **53%**
4. Inconsistent IT quality: **50%**
5. Mandate from the CIO: **45%**

(Respondents were allowed to select multiple answers.)

8 MOST COMMON BENEFITS ACHIEVED

1. Closer alignment with the business: **82%**
2. Increased IT credibility with the business: **77%**
3. Improved customer service/loyalty: **64%**
4. IT quality improvements: **55%**
5. Increased IT staff productivity: **54%**
6. Expense reduction: **47%**
7. Better ability to make IT staffing and outsourcing decisions: **46%**
8. Transparency of costs and benefits of IT: **43%**

(Based on selections of 103 respondents to CIO's survey.)

CIO RESEARCH

ect management office, portfolio management, financial reporting. And it didn't really start to take hold until about two years into the process," he says.

The protracted effort can take its toll on the IT leader. "You're not looking at a three-year legacy with this kind of model," Popolano says. "You're looking at how you'll be running 10 years out or beyond, and a lot of people don't have the staying power for that."

DISARM THE RESISTERS

Besides the hurdle of time, cultural resistance is another challenge CIOs should anticipate. At 7-Eleven, CIO Keith Morrow was surprised at the difficulty of introducing the concept and processes both within IT and among the user community. Now three years into this effort, he realizes that unlike a function such as marketing, a change in how IT operates could affect the nature of people's daily work across every area of a company. Department heads, who once had their own distinct ways of working with the IT group, now have to comply with standardized IT business processes. For example, every IT project now has to have a business case with clear ROI and tangible benefits, even IT infrastructure projects. "This loss of control can be threatening and difficult for those involved," says Morrow.

Morrow has learned that the best way to counter this reaction is through setting expectations. "We try to be very clear and up-front about the goals, roles and the level of commitment we need to be successful," he says. "You have to have a multilevel communications plan that reaches all affected constituents." It's crucial to maintain respect for the dignity and importance of every person impacted by change, Morrow adds.

IT staff can have an even tougher time than internal customers adjusting to the new businesslike processes. The primary reason is that not many IT workers have been exposed to the kinds of governance that other business functions operate under. IT managers at 7-Eleven had a particularly hard time with the new realities of budgeting. "If you run IT like a business, then the budget process must be what it is in any good company," Morrow says. "People didn't realize that there are very hard decisions that you have to make. You have to break contracts. You have to make gut-wrenching business decisions to cut staff."

Morrow overcame the fiscal inertia through performance accountability. IT employees are compensated based on customer satisfaction

COMPANIES THAT THOUGHT THEY COULDN'T AFFORD SAP RUN SAP



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targets, financial performance, knowledge and team development, and their ability to meet deadlines, budget goals and quality metrics.

AVOID A CULTURE CLASH

Some well-intentioned CIOs may develop IT “business models” that are out of sync with the larger corporate culture, which can lead to entrenched resistance and resentment. Atmos Energy CIO Les Duncan saw that happen when he was director of information services at British Petroleum. Each BP business unit had an IT department run as a profit center. They all had their own internal sales and marketing professionals and competed with each other for BP’s IT business. No other corporate function had its own sales team focused on making money, and internal customers didn’t like having to pay IT costs that ultimately led to IT profits. “You must have the functions of a business, but you have to be careful not to look or act too differently than any other department,” Duncan says.

At Atmos, Duncan mirrors the larger business by measuring IT success the same way other functions do—with formal internal customer satisfaction surveys. Other departments don’t have their own HR and financial functions, so neither does IT.

EXPOSURE CUTS BOTH WAYS

Lastly on the subject of hurdles and drawbacks, there’s the unease that can accompany visibility. While greater transparency of technology costs is a goal of running IT like a business, the other edge of that blade exposes IT’s shortcomings for all the world to see. “The whole idea behind running IT like a business

Read More on IT as a Business

Continue the learning curve online. We have an indexed list of articles—the **IT as a Business Reading List**—for each of the seven major practice areas critical to running IT like a business. It’s all in one place: www.cio.com/ritlab.

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5 MOST COMMON BARRIERS

1. Lack of resources and time
2. Lack of business skills within the IT department
3. IT staff resistance
4. End user resistance
5. Lack of corporate backing/commitment

(Respondents were asked to rank their answers.)

5 MOST COMMON PERFORMANCE METRICS

1. Internal customer satisfaction scores: **73%**
2. Performance reviews: **69%**
3. Industry benchmarks: **55%**
4. Performance against service-level agreements: **51%**
5. Formal department financial audits: **27%**

(Based on selections of 103 respondents to CIO’s survey.)

CIO RESEARCH

is to open the kimono,” says Rubin.

But many CIOs are reticent about revealing all. “Your flaws are exposed. The opportunity is there to fail miserably and be very visible,” says Macromedia’s Urwiler. “But just like when you’re running a business, you have to find a way to explain things that don’t go right. If a company has a problem, on a quarterly basis they have an opportunity to talk to shareholders about what happened. And we can do the same thing.”

Urwiler reveals his department’s performance to the company’s IT governance commit-

tee, warts and all. “Every single month we tell them how we’re doing against budget, against cost-cutting initiatives, with strategic projects and systems availability,” says Urwiler. The news isn’t always good, but a simple explanation can go a long way. “You don’t just send out raw data, there’s a color commentary that goes along with it. And in the end, you find, the business appreciates being told the truth.”

At floor manufacturer Mannington Mills, Corporate Vice President of IT Jim Sloane reports back to the business on IT performance every four weeks. “It’s a little scary in the beginning, admitting your flaws,” he says. “But I have found that IT folks work harder on fixing their flaws when they are visible to others.” In fact, Sloane has noticed that major system breakdowns have decreased since IT began reporting on its performance.

STRIVE FOR FINANCIAL METRICS

Mannington Mills’ reduced system downtime may be a good indicator of basic competency—a prerequisite for any viable IT business. But there are other ways to measure success when running IT like a business. The most often used metrics, according to our survey, are internal customer satisfaction scores, IT leader performance reviews and executive committee reviews, industry benchmarks and performance against internal service-level agreements.

But for IT to be seen as a true, credible business, performance metrics need to measure business value in dollars and cents. “Ask most CIOs if they have performance measurements in place, and they’ll often pull out a notebook filled with percentages of uptime. But they don’t have any measurements for IT business value,” says Mark Lutchén, senior vice president at PricewaterhouseCoopers, and author of *Managing IT as a Business*.

At Intel, Busch has made measuring the dollar value of IT a top priority. The IT department launched its own business value program with a goal of delivering \$100 mil-

lion in new value for Intel. The rules are strict: Busch won't count anything that saves money only for the IT group. To be included in the value tally, initiatives must be new, not extensions of old programs. And the total return that can be accrued from any one system is capped at \$20 million. Busch measures the payoff with post-implementation audits—the same tool used by 74 percent of our survey respondents. But he doesn't stop at implementation; he continues to calculate the value accrued over time. The Intel finance organization validates the numbers at the end of the year. The total—\$184 million by 2003's reckoning—represents the business capability IT is delivering to the internal customer.

Along with a value measurement program, CIOs need a communication program to get the good word out. "Having the absolute best value measurements is meaningless if you don't have a communication program," says Lutchen. "You can build a stellar IT organization and still have it be viewed as a failure." For details on how CIOs are marketing their business contributions, see "The Secret Weapon: Internal Marketing," Page 62.

REAP REWARDS

What's great about all this effort is that it truly pays off. When a sampling of the survey respondents were asked to rate the success of their IT business makeovers, 66 percent gave themselves a seven or higher on a scale of 1 to 10. And the most often-cited benefits match the goals that led CIOs to make the attempt in the first place—better alignment with the business and increased IT credibility. Other benefits CIO have realized include greater customer service and loyalty, IT quality improvements, increased staff productivity, cost and value transparency, and better staffing and outsourcing decision-making.

Stronger alignment is palpable at Man-



7-Eleven CIO Keith Morrow based IT staff compensation in part on internal customer satisfaction and financial performance.

nington Mills. "There's no longer the need for constant realignment of priorities. The IT staff truly gets it," Sloane says. "All the IT managers are watching their budgets closely and are not requesting expenditures without first explaining the benefits to the business. The entire staff understands that we exist to service the needs of the other departments in our organization. They are

our customers."

CIOs no longer need to panic when they are called on the carpet to defend IT spending. According to Busch, "If someone is concerned about how much is being spent on IT, we can say, 'Here's the website that shows our unit-cost strategy, what you're paying for IT, a history of our cost reduction, and what we're planning to do next year.'"

The full visibility of IT cost and value also helps the business make fair comparisons when considering outside providers. Gartner's Gerrard points out that outsourcing the help desk might seem like a no-brainer, unless someone realizes that the internal help desk organization also does asset management and tracking. "A whole chunk of service may be done behind the scenes," says Gerrard, "but the general description is 'help desk.' So when the cost is compared to the outside entity, it's unfavorable." Within the first week of an outsourcer taking over, it will become painfully apparent what tasks the external provider is not doing that the internal organization used to handle.

Although it may take more time to make over a deficient IT department in the image of a business, the results will be all the more dramatic. Five years ago, Northeastern University's IT group was "behind in every category you could think of—value to the customer, reliable technology, budget justifications," says CIO Bob Weir, who has spent the past five years trying to run his university IT like his former employer IBM ran its business. "We're prioritizing resources to get the biggest bang for the buck in a repeatable and measurable way," Weir explains. Today, service-level metrics are up, anecdotally customer satisfaction has increased (Weir is instituting a formal survey this year), and Weir won enough credibility to be able to double his budget and increase his headcount by 50 percent within his first three years at the university.

It was no picnic for Huntington Bank's

Out of Business?

Paul Strassmann warns that CIOs who overemphasize running IT like a business could be at greater risk of technology failure

"CIOs are missing the boat if they think running IT like a business will solve all their problems," says Paul Strassmann, a 42-year veteran of corporate and government IT and author of *The Squandered Computer*.

That's not to say that Strassmann doesn't believe in the benefits of running IT like a business. After all, he did just that at Xerox, where he ran the company's information services function as an operating division from 1971 through 1994. When he was appointed to an external task force by the U.S. secretary of defense in 1991 to evaluate the Department of Defense's IT organization, Strassmann recommended recasting the Defense Information Services Agency as a business.

Issuing P&L statements, benchmarking unit costs and offering incentives for meeting performance goals, says Strassmann, can be critical steps in achieving IT efficiency. And that's what CIOs must do if they plan to compete with external services providers. However, he cautions, "you can be efficient—but what happens if you're doing all the wrong things efficiently? That can happen very easily."

An obsession with running IT like a business could distract CIOs from technical operations, to their peril, Strassmann says. CIOs must focus on technical operations and "keep their nose to the grindstone. All the [business discipline] in the world won't go far if the executive floor doesn't get their paychecks [because of an IT mistake] or if the e-mail system goes down." Success depends on maintaining a balance between the technical and the strategic.

In the end, it's likely CIOs will continue to struggle, whether or not they run IT like a business, Strassmann concludes. CIO turnover was just as bad last year as it was in 1995, according to his research, and he doesn't think businesslike IT will do much to increase CIO tenure. "The life expectancy of a CIO is still about 30 months. Everyone is struggling, without exception. The turmoil has not changed," says Strassmann. "Sometimes the changes you make in the IT organization will work. And sometimes they won't. There is no magic." —S.O.



Strassmann

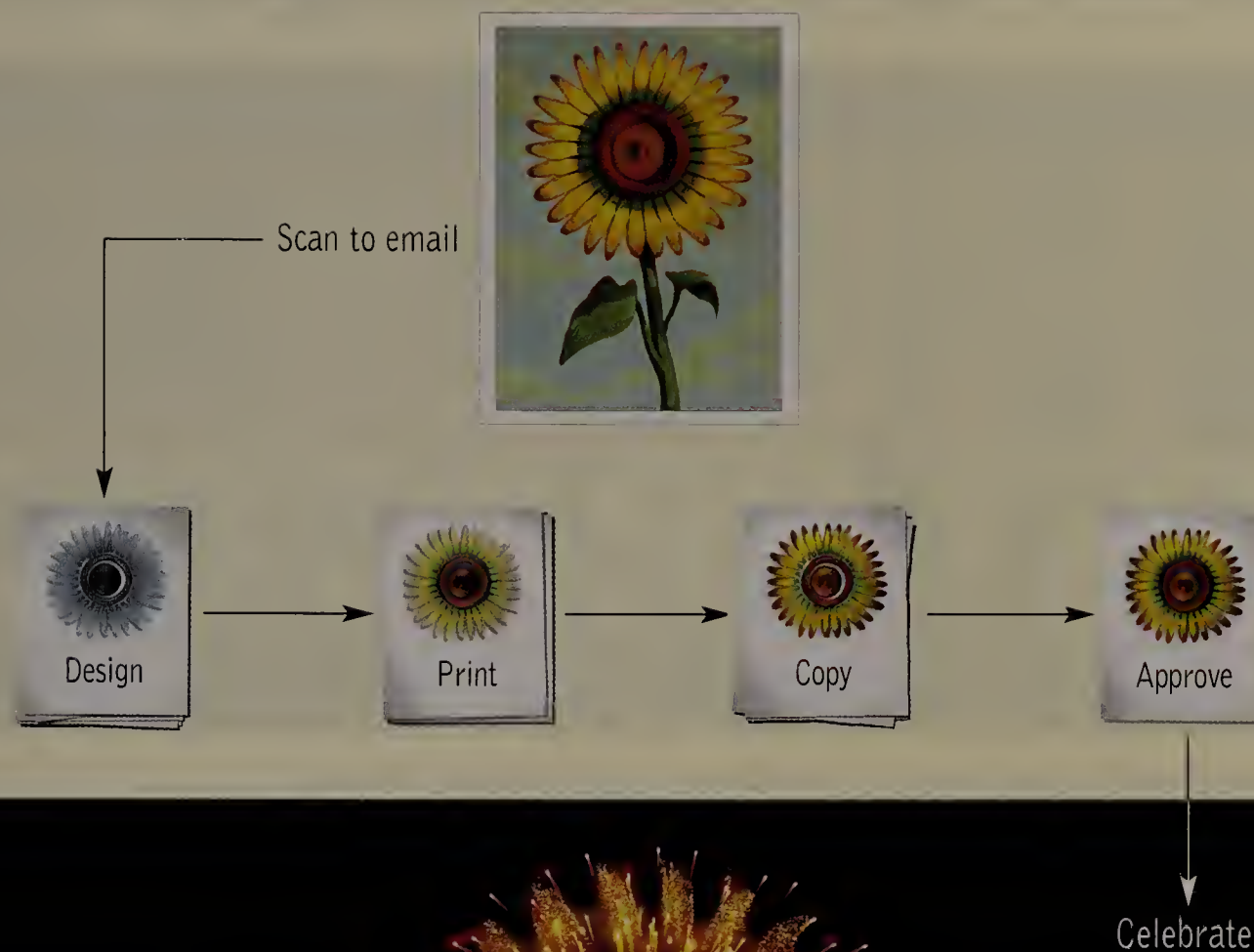
Gottron either. "It was tough. At times I was ready to throw open the window," he reflects.

"But I'm glad I went through it." That hard work may very well be the reason Gottron and his staff are still in business. Last year, Huntington took a serious look at wholesale IT and business process outsourcing, but Gottron squelched the idea by effectively demonstrating the value and performance of his in-house IT function. Or rather, his IT business. **CIO**

The entire IT staff understands that we exist to service the needs of the other departments in our organization. They are our customers.

—JIM SLOANE, VP OF I.T., MANNINGTON MILLS

Send feedback to Senior Writer Stephanie Overby at soverby@cio.com.



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THE BEST BEST PRACTICES

CIO Research reveals the basic building blocks of IT as a business

BY RICHARD PASTORE AND LORRAINE COSGROVE WARE

AS A CIO, YOU HAVE MORE THAN ENOUGH RESPONSIBILITIES AS CHIEF technology strategist, vendor manager, Web overlord and security officer. Now, with the mandate to run the IT function like a business, you also have to be a CEO—planning and executing IT financial controls, marketing campaigns, HR strategies, customer service efforts and all the other disciplines that make a business run. There are probably hundreds of discrete practices that fall into these areas. We focused on more than 40 in our survey, “How to Run IT Like a Business,” which was completed by more than 100 IT executives at companies hand-picked for their excellent IT reputations. But you don’t have to master all of these to do a credible job and capture the benefits. A handful of practices emerged as must-dos, common denominators for you to use as a foundation. And since respondents rated each practice in terms of its effectiveness and difficulty level, we’ve been able to draw conclusions about their relative return on investment. You can see at a glance in the following pages which practices will reward you more (or less) profitably for your effort.

For further discovery, use our online “IT as a Business Profiler” (www.cio.com/ritlab). With this tool, you can input your specific goal for running IT like a business and, based on the data, we’ll compute a profile of practices optimized for achieving that benefit.

5 MOST EFFECTIVE PRACTICES

1. Regularly use portfolio management or other project prioritization methodology: **4.11**
2. Employ an IT-dedicated financial officer: **3.98**
3. Make the CIO a member of the corporate board or executive committee: **3.97**
4. Employ IT department-dedicated business-type positions: **3.69**
5. Win and showcase IT awards: **3.66**

(Ratings based on a scale of 1 to 5, where 1 was least effective and 5 was completely effective.)

TOP 10 MOST UTILIZED PRACTICES

1. Regularly use project management methodologies: **96%**
2. Conduct regular strategic planning meetings to achieve alignment: **93%**
3. Conduct internal customer satisfaction surveys: **86%**
4. Create and use performance metrics: **81%**
5. Regularly use portfolio management or other project prioritization methodology: **80%**
6. Perform financial audits: **79%**
7. Use leadership development programs: **79%**
8. Make the CIO a member of the corporate board or executive committee: **76%**
9. Employ internal relationship managers/account executives to work with the business: **75%**
10. Conduct post-implementation audits: **74%**

(Percentages refer to number of respondents using this practice.)

On \$%*&)\$ Audits... *Audit* is a terrible word. It implies someone who shows up after a battle and bandages the wounded. We do lessons learned after each project. It's a one or two hour discussion, not an audit. If a project went to hell, then yes, we'd do an official audit.

—BOB WEIR, CIO, NORTHEASTERN UNIVERSITY

5 ROI WINNERS & LOSERS

The **most effective** practices that were **relatively easy** to implement

1. Employ an IT-dedicated financial officer
2. Make the CIO a member of the corporate board or executive committee
3. Issue IT P&L statements
4. Regularly use portfolio management or other project prioritization methodology
5. Win and showcase IT awards

The **least effective** practices that were **most difficult** to implement

1. Price IT services based on value (versus cost)
2. Implement quality improvement methodologies such as Six Sigma or Capability Maturity Model
3. Create risk-and-reward-sharing arrangements with vendors
4. Forecast demand for IT services based on metrics
5. Benchmark operations against best-practice IT shops

5 YOU MIGHT NOT HAVE THOUGHT OF

Additional effective practices suggested by our survey respondents

1. **Customer focus:** Create a formal customer advisory board for IT
2. **Marketing:** Perform product management—volumes, cost, revenue, profit, rate-setting and forecasts—for each IT product
3. **Leadership/governance:** Create IT plans for each user group, including multiyear forecast of rates, staffing, budgets and assets
4. **Supplier management:** Sign letters of understanding with vendors at the CEO or COO level
5. **HR management:** Institute a formal project manager certification program

5 WORTH THE EXTRA EFFORT

Relatively difficult but **highly effective** practices

1. Formally manage risk
2. Conduct IT staff talent gap analysis
3. Use a chargeback model
4. Create and use performance metrics
5. Establish a project management office



CIO RESEARCH

THE REST OF THE BEST

RUNNING I.T. LIKE A BUSINESS is not only about efficient operations and financial controls. CIOs need to leverage practices in all the processes and functions typical of any business—customer service, HR, supplier management, marketing and, of course, leadership and governance. Use this chart to find out what the practices are, which are being used most and how each rates in terms of relative effectiveness and difficulty of implementation. The data is compiled from more than 100 respondents to CIO's survey "How to Run IT Like a Business."

How to Read the Charts

We broke down the IT business into seven functions, then asked respondents about specific practices.

The first column, "% Practicing," indicates which of the specific practices our respondents employ.

In the second column, "Effectiveness," we asked how effective the specific practice was in achieving their goals. Respondents were given a sliding scale of 1 to 5, with 1 indicating not at all effective and 5 indicating completely effective. We then took the average of those ratings for each practice, and rounded to two decimal points.

The third column, "Difficulty," shows how difficult the specific practice was to implement. Again, respondents were given a sliding scale of 1 to 5, with 1 indicating not at all difficult and 5 indicating very difficult. We then took the average of those ratings for each practice, and rounded to two decimal points.

Use the Profiler

Want to find what to do to best suit you? Use our online IT as a Business Profiler. Choose your specific goal for running IT like a business, and based on survey data, we'll compute a profile of practices optimized for achieving that benefit. Go to www.cio.com/ritlab.

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	% PRACTICING (SCALE OF 1 TO 5)	EFFECTIVENESS (SCALE OF 1 TO 5)	DIFFICULTY (SCALE OF 1 TO 5)
LEADERSHIP/GOVERNANCE			
Conduct regular strategic planning meetings to achieve alignment	93%	3.55	3.19
Regularly use portfolio management or other project prioritization methodology	80%	4.11	3.41
Make the CIO a member of the corporate board or executive committee	76%	3.97	2.95
Assemble an IT board of directors drawn from IT and business functions	63%	3.45	3.00
Employ IT-dedicated CFO, COO, HR, marketing or other business-type positions	56%	3.69	3.23
FINANCIAL CONTROLS			
Perform audits	79%	3.49	3.12
Perform total cost of ownership/asset management	72%	3.21	3.36
Formally manage risk	67%	3.48	3.32
Competitively price IT services versus outside providers	54%	3.42	3.00
Use a chargeback model	50%	3.48	3.22
Employ an IT-dedicated financial officer	45%	3.98	2.66
Issue IT P&L statements	28%	3.24	2.53
Retain IT earnings for future investment	19%	3.07	3.24
Set prices based on value (versus cost)	16%	3.04	3.56

CIO RESEARCH

METHODOLOGY: CIO conducted the study, "How to Run IT Like a Business," online from Nov. 1 through Dec. 15, 2003. We identified a select group of CIOs recognized by CIO editors and industry leaders for effectively managing IT, and invited them to take the survey, which itself was crafted with input from respected IT leaders and topic experts. Results are based on the responses of 103 IT executives, 82% of whom held the title of CIO. Four percent were CTOs, 5% were vice presidents of IT, and the remaining 9% were directors of IT for their

organizations. Survey respondents represented a broad range of industries including manufacturing (20%), finance (12%), insurance (12%), federal, state and local government (10%), and wholesale, retail and distribution (10%). Twenty-six percent of executives included in our study came from very large organizations with greater than 10,000 employees, while 51% were with companies that have 1,000 to 10,000 employees. Less than one-quarter (23%) came from companies with fewer than 1,000 employees.

On Marketing... We recently announced a rebate to our internal customers. The idea of a division **giving money back is jaw dropping.** I recognized the marketing opportunity and personally delivered the rebate checks to key customers.

—STUART MCKEE, CIO, WASHINGTON STATE

	% PRACTICING	EFFECTIVENESS (SCALE OF 1 TO 5)	DIFFICULTY (SCALE OF 1 TO 5)
OPERATIONS MANAGEMENT			
Regularly use project management methodologies	96%	3.64	3.30
Create and use performance metrics	81%	3.44	3.15
Employ internal relationship managers/account executives to work with the business	75%	3.61	3.03
Conduct post-implementation audits	74%	3.22	2.78
Establish a project management office	70%	3.42	3.30
Benchmark operations against best-practice IT shops	66%	3.20	3.43
Forecast demand based on metrics (backlog, book-to-bill ratios, etc.)	35%	3.13	3.38
Implement quality improvement methodologies such as Six Sigma or Capability Maturity Model	32%	3.33	3.68
Employ IT-dedicated operating officer	28%	3.31	2.81
CUSTOMER SERVICE FOCUS			
Conduct internal customer surveys	86%	3.44	2.77
Implement internal service-level agreements	73%	3.29	3.49
Conduct external customer surveys	39%	3.28	2.86
Link IT staff compensation to customer satisfaction	33%	3.26	3.19
Offer customers choice of internal or external sourcing of IT services	24%	2.94	3.09

	% PRACTICING	EFFECTIVENESS (SCALE OF 1 TO 5)	DIFFICULTY (SCALE OF 1 TO 5)
HUMAN RESOURCES MANAGEMENT			
Use leadership development programs	79%	3.49	3.04
Compensate/reward IT employees/managers based on the performance of the IT organization	56%	3.47	2.89
Conduct talent gap analysis	53%	3.43	3.27
Use forced ranking	42%	3.32	3.24
Employ HR officer for IT	29%	3.42	3.12
SUPPLIER MANAGEMENT			
Consolidate vendors	73%	3.21	3.33
Audit against vendor service-level agreements	57%	3.33	3.39
Employ internal supplier relationship managers/account executives	55%	3.32	3.12
Achieve most-favored-customer status	47%	3.42	3.02
Create risk-and-reward-sharing arrangements	45%	3.31	3.60
MARKETING			
Brand specific IT/business projects	63%	3.40	2.81
Win and showcase IT awards	63%	3.66	2.97
Publicize service-level metrics and audits	62%	3.39	2.98
Brand and market the department and its services throughout the enterprise	47%	3.22	3.08
Distribute IT "Annual Report"	43%	3.26	3.06
Publish catalog of services/standards	42%	3.33	2.93
Publicize pricing/total cost of ownership comparisons and audits	28%	3.09	3.03
Employ IT-dedicated marketing leader	16%	3.09	3.12

THE SECRET WEAPON: INTERNAL MARKETING

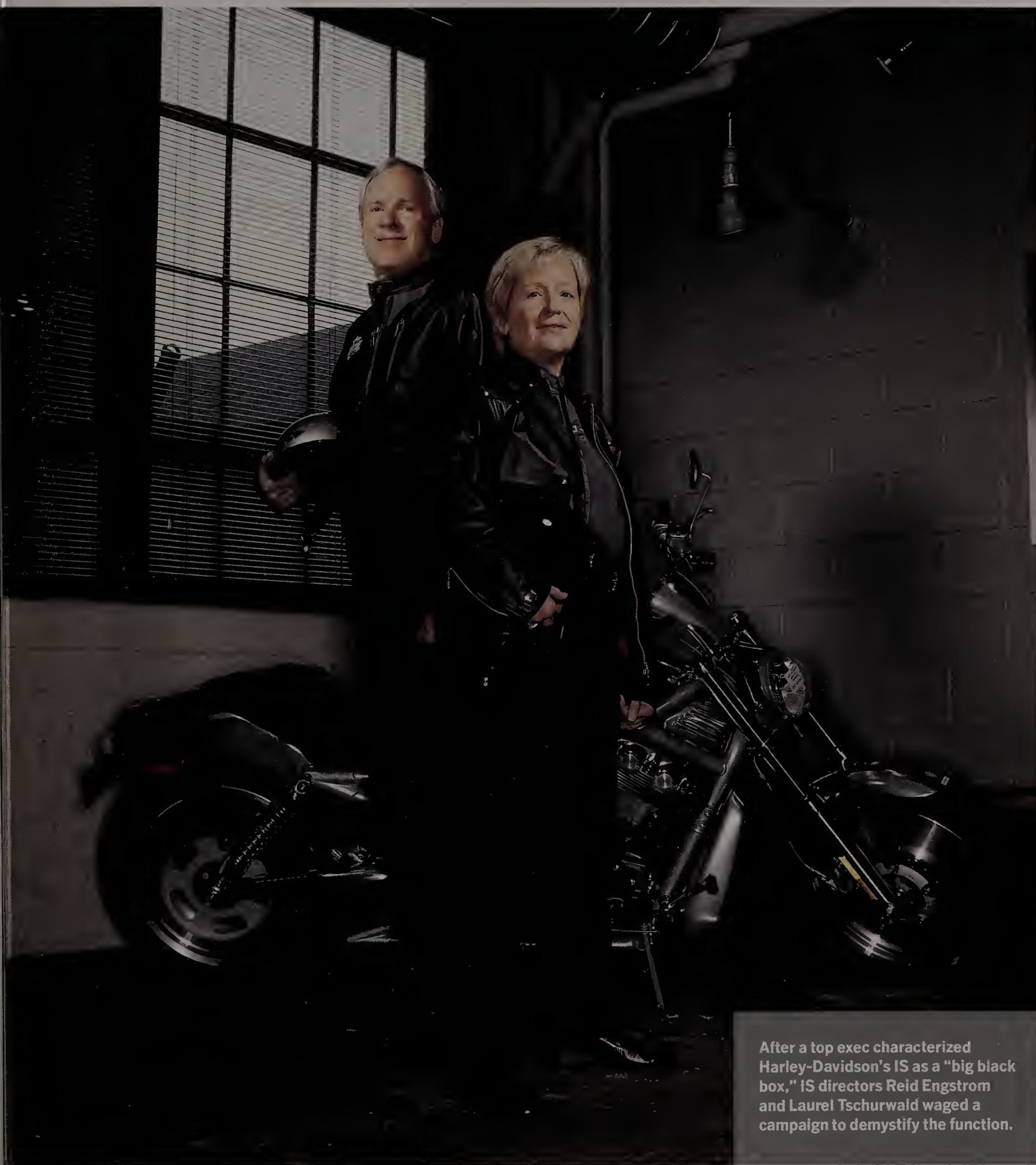
It's the best-kept secret for success: Marketing IT's achievements will boost its credibility, create transparency and might even help win instant approval for your next \$2 million project. BY ALICE DRAGON

Reader ROI

- ▶ Elements of a successful IT marketing campaign
- ▶ The benefits and risks of branding
- ▶ The best print and online vehicles for getting your message out

In 2001, a member of the senior leadership team at Harley-Davidson, invited to an IT town hall meeting to articulate business leadership's view of the IT function, described it as "a big black box that you pour lots of money into and pray good things come out." For IT coleaders Laurel Tschurwald and Reid F. Engstrom, the black box metaphor was a painful wake-up call. "We had always thought that everyone knew what we were doing and valued our contributions," says Tschurwald. In response, the two launched a campaign to demystify IT. They brought in senior business people to review and manage all IT project requests. They initiated internal service-level agreements, IT financial audits and quality-improvement programs. And to make sure everyone heard about the value IT was delivering, they started publicizing their efforts in quarterly "enterprise status reports." The reports recap each initiative's business case, strategic alignment and associated metrics, and summarize the status of every project valued above \$100,000. It's a "key marketing vehicle," Engstrom freely admits.

The idea of marketing IT makes a lot of CIOs nervous. Sure, they're willing to treat their business colleagues as customers, and some have no qualms about charging those same customers for IT services. But launching a *campaign* to trumpet IT's value, communicate its costs, and promote its products and services?



After a top exec characterized Harley-Davidson's IS as a "big black box," IS directors Reid Engstrom and Laurel Tschurwald waged a campaign to demystify the function.

Well, that feels a little too hucksterish to your average IT executive. Besides, who has excess money lying around to invest in marketing?

But marketing IT internally may be the secret ingredient fueling CIOs' efforts to run IT like a business. We say secret because on average, less than half of the CIOs who say they run businesslike IT shops are actually taking advantage of marketing, according to CIO's survey, "How to Run IT Like a Business." Yet, those respondents who have attained such prized and elusive benefits as enterprisewide visibility of IT value and cost, improved customer loyalty and increased IT staff productivity do more marketing than does the general survey population—in fact, as much as 25 percent more. These IT leaders are building thematic, targeted campaigns around IT initiatives and branding projects to increase awareness and build momentum and buy-in. And they're using a range of communication vehicles to bring the message home that IT *is* run like a business—one that brings verifiable value to the enterprise.

"Marketing is absolutely critical to being internally successful," says Stephen Norman, COO of Merrill Lynch's technology group. "We live in a world where by and large our customers don't understand what we do. So we need to market internally to have a shot at building partnerships and avoiding surprises."

Steve Sheinheit, CIO of MetLife, agrees. "That we have to communicate and market is a fact of life," he says. "If you want to get resources and support, you have to sell your message. Marketing and communications is a natural part of doing business."

Communicating IT's contribution to the business is especially critical given the increasingly tempting siren song of outsourcers. Marketing hype and slick campaigns from offshore vendors and consultants help make outsourcing look mighty appealing on paper. But internal IT organizations may actually provide more services at a better value. IT leaders just haven't taken time to clearly

define, price and package their services in an equally appealing format.

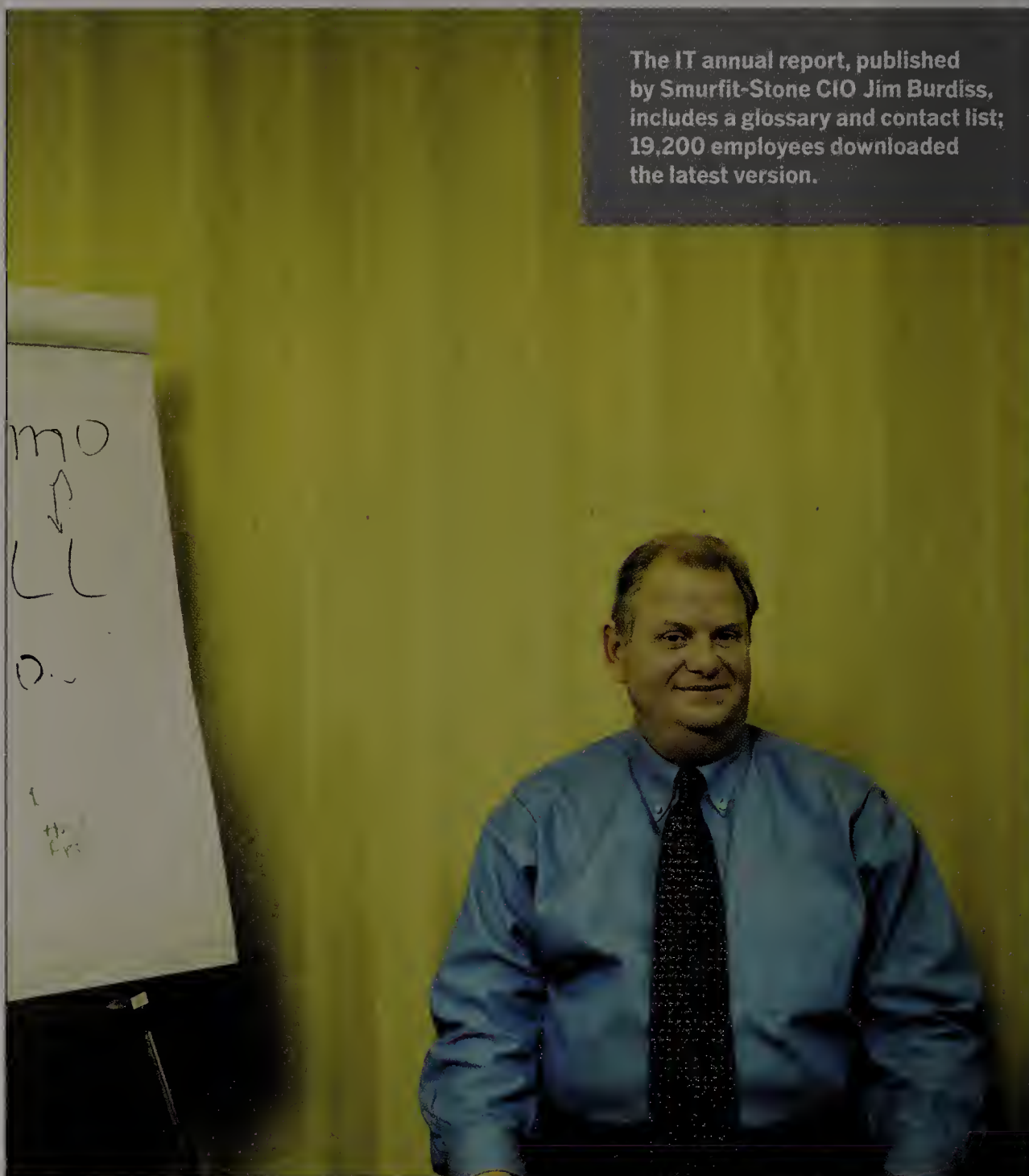
Making sure the business is well aware of the IT team's accomplishments also provides IT the credibility it needs to win approval for unglamorous infrastructure investments and the goodwill to weather inevitable storms. "In technology, you always have issues," says Joe Gottron, The Huntington National Bank's CIO. "If you've got nothing to balance the noise in issues, guess what? People are only going to remember the issues. And it won't be long before lights out, game over."

But be forewarned. Marketing will come off as a lot of hot air—and could even damage IT's reputation—if CIOs haven't built an organization that can consistently deliver the goods. And there's a fine line between effectively promoting IT's contributions and tooting your own horn.

SEEK EXPERTISE

Marketing guru Scott Bedbury, who led the "Just Do It" campaign at Nike and turned coffee into a mystical experience at Starbucks, says the best marketers don't merely convey facts—they also tap into people's emotions. "No mat-

The IT annual report, published by Smurfit-Stone CIO Jim Burdiss, includes a glossary and contact list; 19,200 employees downloaded the latest version.



Beyond Defense: VeriSign Security Intelligence and ControlSM Services

To be truly effective,
corporate security
systems must be
proactive



CENTURIES AGO, state-of-the-art security measures included moats and drawbridges—vital assets to help castle lords keep enemies at bay. Today's leading-edge security tools take the form of sophisticated technology that business leaders use to protect their valuable assets. And yet, when it comes to information security, many enterprises haven't moved far from those medieval notions of security. Their electronic moats and drawbridges may defend against intruders, but they also repel trusted partners and customers.

This is the quandary that hinders business success: Today's enterprises stake their livelihood on information networks that allow the open flow of data with clients, distributors and suppliers; and yet these same networks provide entry for malicious hackers, viruses and worms.

Securing information behind a firewall is no longer good enough. Today's business leaders must employ a security strategy that's proactive—one whose systems anticipate attacks, recognize pat-

terns within the attacks, and then correct weaknesses within their defenses instantly...without compromising business operations.

"Unlike a lot of areas of information technology, security is very dynamic, and it overlays nearly every other aspect of information technology," says Maria Cirino, senior vice president, Managed Security Services at VeriSign Inc., the Mountain View, CA-based provider of critical infrastructure services for the Internet and telecommunications networks. "Companies can't just build a firewall and assume that they are protected. Security procedures and technologies must be constantly updated and an in-depth approach toward defense needs to be adopted."

That's what VeriSign's Intelligence and ControlSM Services are all about. VeriSign owns and operates eight state-of-the-art data centers and 13 network operation centers around the world. Every day, its operations centers manage tens of billions of transactions across the Internet and on various telecommunications networks. That experience gives VeriSign unmatched real-time insight into what's happening on the Internet—insight that, in turn, gives VeriSign's managed security customers a strong competitive edge.

"Because of our rich heritage in Internet and telecommunications, we can cross-correlate Internet data with security event data and do some amazing intelligent pattern recognition, trend and anomaly detection," says Cirino. "In managed security services, the more you see, the more you know, and because we're a market leader with unique access to high volume security event and Internet traffic data, we have a unique and powerful ability to protect our customers. That protection gets stronger with every new customer."

VeriSign's Intelligence and Control services model of information security is based on four guiding principles:

Device Independent

Integration. Enterprises that try to build security in pieces, or by application, run the risk of missing vulnerable spots by concentrating on protecting pieces of the business rather than the whole. And as

"Companies can't just build a firewall and assume that they are protected. Security procedures and technologies must be constantly updated and an in-depth approach toward defense needs to be adopted."

Maria Cirino, Senior Vice President, Managed Security Services, VeriSign

 VeriSign[®]

HYATT INTERNATIONAL

Safeguarding Customer Data—Without Locking Up the Company

For Hyatt International, the customer truly is the business, so executives take any information about their clientele very seriously. Ensuring security of this client data also poses a serious security challenge—so serious that until recently, Hyatt did not have Internet connections at its hotels and regional offices. “The privacy and integrity of our customer data has always been a top priority for Hyatt,” says Mark Retnam, director of global communications technology. But as the need for Internet communications grew to be a primary means of data communication, that policy had to change. “The Internet was recognized as a valuable tool for our hotels and an effective means of data communications within our corporation. However, the challenge was that Hyatt International did not have technical resources available to roll out and manage a global firewall/VPN infrastructure,” Retnam says.

Hyatt turned to VeriSign for help, awarding them a multi-year contract to manage network security devices. Hyatt will use VeriSign Intelligence and Control Services for Network Security, including Managed Firewall and Virtual Private Network (VPN) capabilities, to enable the efficient and secure flow of information between its corporate and international sites.

“Hyatt International selected VeriSign because of the unique security and network intelligence they gather from operating critical infrastructure, like the root DNS servers, at the heart of the Internet,” Retnam says. “We can leverage that knowledge to help us react appropriately to security threats.”

advances such as voice-over-IP and mobile computing go mainstream, the patchwork of overlapping products will become even more difficult to manage. Intelligence and Control Services seek to address this problem by providing an integrated security environment regardless of technologies. It leverages a combination of real-time integration and diagnostic tools to provide an integrated view and real control over a complex and heterogeneous environment.

Pervasive Security. Many companies focus on discrete security hotspots, such as firewalls, intrusion detection or network security. “[But] companies need to be able to look across multiple layers, not only within the company but outside the corporate walls, too,” says Anil Chakravarthy, director of product management at VeriSign. Moreover, business leaders must be able to assimilate and analyze the massive amounts of information gathered daily about the flow and access of data by employees, partners, customers, devices and applications. Most companies don’t know how to meaningfully use the information that pours into their security tools. VeriSign does, providing pervasive security from state-of-the-art security monitoring, advanced correlation and inference engines to process events, and the ability to determine meaningful patterns across multiple networks and applications 24 hours a day, 7 days a week, 365 days a year.

Collective Intelligence. As enterprise networks become increasingly interdependent, it’s not enough to limit security efforts to a single network. Intelligence and Control services place a premium on the ability to develop intelligence from data across the entire span of technology used both within and outside of an enterprise—data gathered between enterprises and across the Internet, for example. Worms such as Blaster and Sobig, which attack by spreading rapidly across boundaries, prove that leveraging the collective intelligence from network impact is critical to any successful security strategy. VeriSign

withstands more than 1,000 website attacks each day on behalf of its 90,000 merchants and 4,000 enterprise customers. “We have the breadth of services and a unique view into the Internet to provide services to our customers worldwide,” Chakravarthy says. “Very few companies can bring that kind of intelligence to bear on the information security problem.”

Conclusive Action. While collecting and analyzing information across an enterprise infrastructure is vital, equally important is knowing when and how to take action. Companies must know how to interpret the intelligence—from global sources of data and intelligence—to support conclusive decisions. For Intelligence and Control Services to be useful, they must present the enterprise with enough information to make informed decisions, weigh risks and take conclusive action rooted in business logic.

Ultimately, a thoughtful approach to security results in an enterprise that is free to do what it does best—conduct business in the most expedient way possible, whether linking supply chains across enterprises or using the Internet to build a strong ecommerce model.

By using Intelligence and Control Services to protect their corporate castles, enterprise leaders can move beyond the moat/draw-bridge approach, get more value out of their existing information security infrastructures and concentrate on their most important project: their business. ☺

For more information, visit www.verisign.com/security

“Hyatt International selected VeriSign because of the unique security and network intelligence they gather from operating critical infrastructure, like the root DNS servers, at the heart of the Internet. We can leverage that knowledge to help us react appropriately to security threats.”

Mark Retnam,
Director of Global
Communications
Technology,
Hyatt International

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ter what the challenge, the greatest benefits of any product or service are usually emotional and not entirely tangible,” he says. IT people often forget that technology generally helps meet some emotional need, whether it’s to gain control or power, avoid risk, feel complete or satisfied, or just realize potential, Bedbury says.

A good first step, then, in building a marketing program is finding someone who understands these needs and knows how to use them to connect with people—an experienced marketing pro. At Tyson Foods, CIO Jeri Dunn employs an organizational change consultant to help with marketing and is looking to hire a vice president of organizational change whose responsibilities will include overseeing communication. Dunn readily admits communication is not her forte and that she needs help crafting messages. She says she tends to assume that everyone has the same level of understanding on IT issues that she does. “The organizational change person will keep me honest,” Dunn says. “If I’m going 100 miles an hour, I need someone to say, ‘Hey wait, no one’s following.’”

Having experienced staffers at least partly dedicated to (and accountable for) marketing communication can help IT groups build proactive campaigns to replace the reactive, defensive communication that is more typical in IT (see “What’s Your Marketing Maturity Level?” Page 70). Even if a company lacks the resources to devote someone to marketing, the CIO should consider tapping into the expertise of the corporate marketing and communication department. If nothing else, this group will have the independence to see things from the internal customer’s point of view.

FIND THE TARGET

CIOs typically have six distinct audiences: internal IT staff, end users, line of business heads, executive management, the board of directors, and vendors and partners. An effective marketing campaign will tailor messages for each group, taking into account what matters most

Your Marketing Campaign Checklist

Consider making these steps, tools and techniques part of your own internal IT marketing efforts

- ☐ Appoint an IT-dedicated marketing/communication professional.
- ☐ Differentiate your audiences, and understand their priorities.
- ☐ Choose key themes that tap into emotional aspects of business benefits.
- ☐ Schedule quarterly IT business reviews with the executive team.
- ☐ Brand the IT organization to create an image of professionalism and effectiveness.
- ☐ Brand individual IT projects to generate awareness, momentum and buy-in.
- ☐ Publish an IT catalog that defines products, services and SLAs in customer-oriented terms.
- ☐ Create scorecards with metrics meaningful to the business.
- ☐ Incorporate external cost benchmarks into scorecards and IT invoices to emphasize value.
- ☐ Produce IT annual reports that include useful resources for employees.
- ☐ Create brochures to raise awareness of IT systems and services.
- ☐ Publish newsletters with case studies that demonstrate technology’s business value.
- ☐ Enter IT award programs and publicize wins with business partners to increase credibility. —A.D.

to each. “If you meet with the CFO, the presentation should be numbers-driven,” advises Patricia Jaramillo, CEO of Magnolia Communications, an IT marketing consultancy. “Don’t tell me how many outages you had. What did it mean in dollars?”

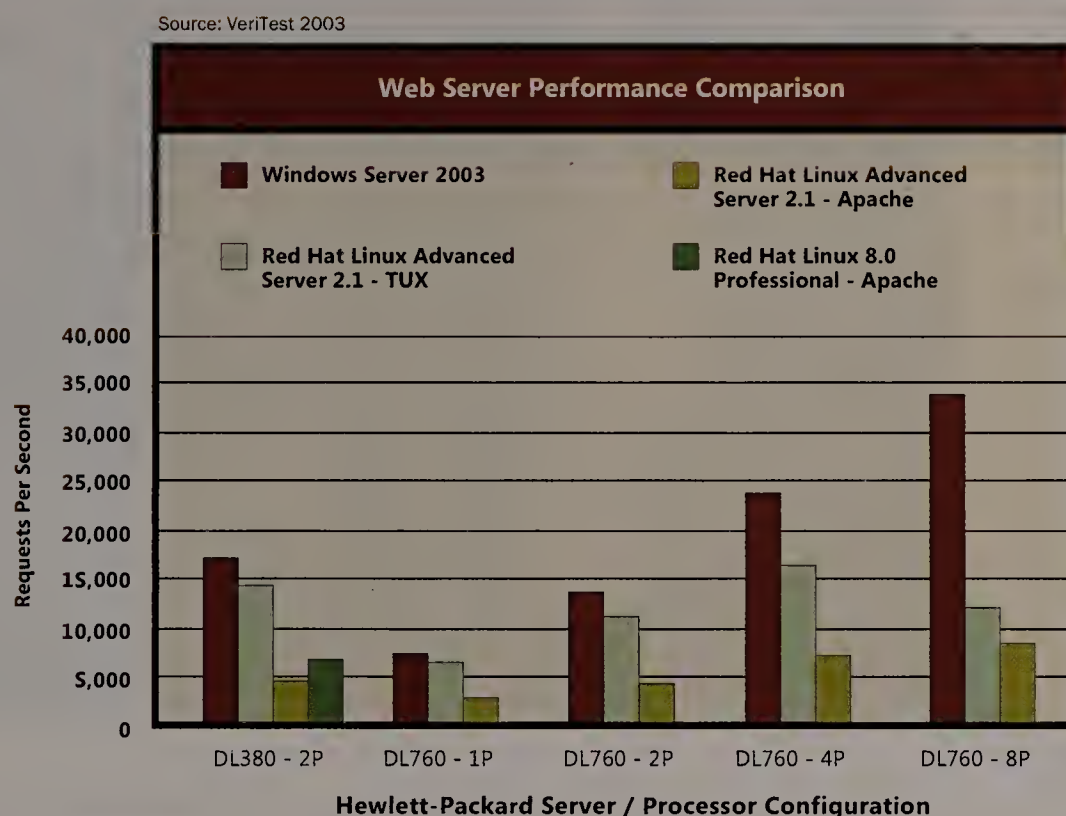
When marketing a new plant maintenance system to Tyson plant managers, Dunn had the group vice president of production services talk up the system’s benefits. “He had more impact making this presentation because he is owner of the business process. He is the champion for the change,” says Dunn. One slide in his presentation touted productivity benefits by showing a plant maintenance employee working in front of a PC rather than hanging out in the coffee-break room. That slide would not, however, resonate with salespeople. When Dunn updates

the sales team on an IT initiative, she describes how it will save money, which the company can invest in more advertising.

Generally, the higher up in the organization the target, the more simplified the marketing message should be. When Steven Agnoli, CIO of Kirkpatrick & Lockhart, writes his monthly status report for executive management, he consciously keeps it short and sweet. “I don’t want to get into minute detail on technical stuff,” he explains. “It’s important for them to understand there’s a lot of work going on, we’re completing assignments and they’re actually getting things for the money they’re spending.”

Agnoli is also careful to write in business terms to avoid clouding the message with what he calls technical mumbo jumbo. To that end, he enforces the “no acronym” rule for all communication that crosses the IT threshold.

WHICH OFFERS SUPERIOR PERFORMANCE: WINDOWS OR LINUX? THE RESULTS ARE IN.



The Windows platform generated up to 300 percent better peak Web serving performance compared to Linux according to a recent benchmark test conducted by VeriTest, a leading independent testing company. In fact, VeriTest found that Windows Server™ 2003 with Internet Information Server (IIS) 6.0 outperformed every Red Hat Linux configuration they tested, regardless of the server employed or the number of processors. To get the full study and more third-party findings, visit microsoft.com/getthefacts



"In the IT world, there are probably more acronyms than words," he deadpans.

At Harley-Davidson, initial attempts to educate executives on "the business of IS" met with resistance. "Early on, we had a lot of people who said, 'I don't want to know this stuff. Don't confront me with your business. I don't confront you with mine,'" says Engstrom, who shares the title of director of information services with Tschurwald. "We concluded that we hadn't yet put the information in front of people in a manner they could absorb or that really established their interest level." The quarterly report succeeds because it directly relates what IT is doing to the business executives' strategies and goals.

The upshot is that Engstrom, who once had trouble getting anything funded, says he recently gained executive approval for a \$2.1 million project in less than a minute.

THINK THEMATICALLY

Once CIOs have identified who they want to reach, they need to think through the key messages or themes to convey. For example, if a CIO is having trouble marshaling support from the executive committee for infrastructure investments, a key message might be that sound infrastructure produces value, says Howard Rubin, executive vice president at Meta Group. He suggests explaining how infrastructure can yield value on three levels: economic (lets you operate at low cost), operational (allows you to tune reliability to what you need) and architectural (you can increase business volume without having to pay a dollar more). Another key message for users concerned about IT costs might be that business executives can control IT costs themselves. CIOs can reinforce this, says Rubin, by identifying user costs as fixed or variable, and pointing out how variable costs can be contained.

At MetLife, Sheinheit comes up with an annual theme to drive the year's IT communication. Last year, the theme was "Finding the R in ROI." This year's theme is "Moving IT to

the Next Level." Subthemes include investing for growth and increasing agility. Sheinheit and his team mapped all of the year's IT initiatives against the themes, so all communication about projects is put in the context of how they relate to those overriding goals. MetLife's themes get woven into Town Hall presentations, newsletters, desktop tchotchkes and something Sheinheit calls "meeting in a box": To quickly cascade the theme throughout the IT organization, the top 50 or 60 IT execs receive prefabricated presentations to take back to their groups. Presentations also go on the IT Web portal for other

presenters to draw on, saving time and ensuring message consistency.

Sheinheit launches his themes to the internal IT staff before pitching them to the business audiences. "You've got to get yourself aligned," he says. "You can't give a message to the outside community if it doesn't resonate internally. You drive it down and send it up, and it interconnects in the middle."

BRAND I.T.

Because technology can seem complex, confusing or (believe it or not) just plain dull to



Washington state CIO Stuart McKee applies for IT awards that will showcase innovation, and shares the spotlight with his customers to generate goodwill and low-key PR.

those outside IT, putting a meaningful brand name on an IT initiative can help CIOs telegraph the value in a concise, accessible and memorable way. In fact, the *CIO* survey revealed that branding specific IT projects or services is among the most effective and popular marketing practices.

At e-commerce outsourcer GSI Commerce, CIO Joe Seibert branded an initiative to revamp the project management process and improve time to market. He officially launched "Project Velocity" with a large sign hung over the project management office area and a kick-off pizza lunch for 100 assorted constituents. By relating process improvement to a business value—speed—Seibert's team was able to generate awareness and excitement and bring down the level of fear that accompanies business process change. The increased buy-in and project momentum that branding garners "makes my job a lot easier," Seibert says.

If an IT department suffers from a credibility problem, branding can also be used to help readjust negative perceptions once the underlying problems have been addressed. For example, IT's reputation at the Defense Contract Management Agency suffered from some real (and some merely perceived) failures. When Mike Williams became CIO in 1999, "the feeling inside the agency was that we weren't up to speed with corporate America," he says. True, some software apps had been deployed before they were ready. "There were too many bugs, and we fixed that," says Williams. But there were still residual pockets of negative perception. Williams changed IT's official name to the IT Customer Service Organization, and one of his group's Web designers came up with an official logo. "Branding and the logo helped signal the idea that we're changing," says Williams.

Branding that's out of character with the corporate culture (splashy branding in a company that values consensus and collaboration, for example) is a big no-no, says Michael Gerard, vice president and chief of research for

5 | CAMPAIGN TACTICS

Respondents to the *CIO* survey "How to Run IT Like a Business," ranked the following as the most effective marketing practices.

1. Win and showcase IT awards
2. Brand specific IT/business projects
3. Publicize service-level metrics and audits
4. Publish a catalog of services/standards
5. Distribute an IT annual report

CIO RESEARCH

IT management at Gartner. "The branding strategy has to reflect the customers that you've got," he says. "If you choose a really inept branding strategy, you can end up with negative brand equity. You'll be seen as amateurish when you want to seem professional."

GET FACE TIME

If you think of IT as a brand, then the CIO is its spokesman. CIOs must, therefore, get in front of their constituents and "sell" the brand on a regular basis. Gottron schedules one-on-one reviews with management committee members, where he recounts what he said IT would do and what it actually did during the past three months. He then previews and validates the priorities for the next three months.

The bank's vice chairman and CFO, Mike McMennamin, appreciates the meetings with Gottron. "I walk away knowing he's working on six things for us, three of which are crucial," he says. "I know exactly the time frame and what additional resources need to be dedicated to a project."

McMennamin realizes these meetings are also marketing opportunities for Gottron. "Sure, Joe's a marketer, but in the positive sense of the word," McMennamin says. "He keeps us tuned in, and we agree on a set of

expectations. I feel like we're partners."

Whatever the frequency and format, communication must be two-way. Gottron confesses he sometimes gets so caught up in extolling IT's accomplishments that he's gotten feedback that he doesn't always slow down enough to listen for concerns. "If they've got something stuck in their head, they'll have a tough time listening," Gottron says. And if they're not listening, they won't get the message that IT is delivering value.

PUT OUT A CATALOG

A new category of IT marketing publications is the catalog of IT services. Though still relatively rare, catalogs are perhaps the best vehicle for achieving cost transparency, according to Meta Group's Rubin. "Even if a company does not have chargeback, a catalog is essential for creating a lingua franca for what IT does for the business," he says.

As part of an initiative called "Cost Transparency Now!" Merrill Lynch has produced an online IT catalog that describes IT products and services in customer-oriented terms, defines service-level agreements and puts a price tag on all services that IT provides. For example, the BlackBerry entry has indexed tabs for product information (description and benefits), pricing (fixed and variable costs for e-mail and paging services), SLA details and user documentation by model. Qualified users can order a BlackBerry through an online purchasing system linked to the catalog. Developing the catalog is a precursor to moving to full chargeback at Merrill—by this September, 98 percent of IT charges will be billed to users as services consumed. Eventually, IT's customers will look at a simple bill and tell how many units of each service they've consumed. "They'll be able to say, 'Why am I consuming 6.5 terabytes of replicated disk?' They will start to manage their costs instead of looking to me to manage costs," says COO Norman.

Norman plans to add external benchmarking cost data to the catalog later this year,

What's Your Marketing Maturity Level?

IT marketing is wide ranging: from ill-defined and reactionary to interactive and strategic. CIOs who hope to play the role of strategic partner to the business need to ramp up the maturity level of their communication programs.

LEVEL	1 AD HOC	2 DEMAND-DRIVEN	3 PROCESS-BASED	4 CUSTOMER PROACTIVE	5 ENTERPRISE AND I.T. PROACTIVE
MARKETING FOCUS	Communication is occasion-specific and usually driven by projects or reactive reporting needs	Reactive communication driven by recurring demand for status information on projects or overall IT performance	Regular status communication at the IT portfolio level and on overall performance	Proactive interaction with customers through regular meetings and documents that address current and future performance	Proactive interaction with entire customer community and individual customers
PRIMARY MARKETING TOOLS	• Status reports • Briefings	• Project-level scorecards	• Newsletters • Recurring planning meetings	• Quarterly business reviews • Newsletters • Scorecards	• Board-of-director style IT governance, with regular reports • Scorecards with lagging and leading indicators • IT information available real-time
I.T. ROLE IN ENTERPRISE	Factory/commodity	Factory/commodity	Preferred partner	Preferred partner	Strategic partner

SOURCE: Adapted with permission from Magnolia Communications' Marketing Maturity Grid

both to assure customers that they're getting value for their money and to reinforce for IT service managers that they are competing with outside providers.

At telecom company Global Crossing, employees use IT's online catalog to order hardware and any service IT provides, including access to applications. Managerial approval and delivery are automatically managed through a workflow process. Although CIO Dan Wagner does not operate a chargeback model, he says providing automated services through the online catalog helps keep costs down and lets him easily track statistics on all services IT provides.

In developing an IT catalog, it's critical to define services in terms of what customers

want to buy, not a laundry list of IT tasks, warns Gartner's Gerrard. For example, if IT offers desktop provisioning for a new employee, a business manager doesn't want or need to know that this entails procuring a desktop device, loading software, setting up passwords, enabling e-mail, connecting to the LAN and arranging installation. She just wants a computer ready to go when the new employee shows up on Monday morning.

PUBLISH, PUBLISH, PUBLISH

Professional marketers swear by the effectiveness of print vehicles and advise that one or more should be a staple in any IT campaign. But before publishing any collateral, read it

carefully from the audience's point of view. "I don't think it's possible to overcommunicate," says Smurfit-Stone CIO Jim Burdiss. "But I do think it's possible to overmarket. Then people see it as self-serving. Instead of helping demonstrate value, it becomes idle chatter and does the opposite of what it's intended to do."

The IT annual report is one of the most effective tools used by our CIO survey respondents. Smurfit-Stone's IT shop publishes an annual report that gives people an appreciation of the scope of IT's responsibilities and its performance levels (for example, 110,000 calls were handled in the support center at a cost of \$17.80 per call). And it itemizes the value created by IT projects—say hypothetically, a forecasting tool

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reduced inventory by 10 percent and saved the company \$1 million. The report is personalized with snapshot profiles of IT staff and includes an index of whom to contact for what. It also features a popular glossary of industry and technology terms, defining such concepts as problem escalation, enterprise application integration and IT asset management.

"It's designed to not just be an annual report but also a resource tool for customers," says Burdiss. "If we just reported financial numbers, everyone would go, 'Aw, they're just patting themselves on the back.'"

Out of 37,000 total Smurfit-Stone employees, nearly 19,200 chose to download a PDF version of last year's report from the Web. Tom Lange, the company's director of public relations, finds the glossary and IT contact list personally helpful and says the annual report has done a lot to change the general perception of IT. "I used to think of IT as this black hole of people and IT stuff," he confesses. "People would say things like, 'Why can't IT just get that done? Why does it take two days to do anything?'" Now, instead of wondering what's going on, Lange and other business customers know what IT is up to, what the priorities are and how IT efforts relate to the company's packaging business.

State of Washington CIO Stuart McKee says his organization's annual reports feature content similar to a private-sector shareholder report, but he consciously skimps on their production values to avoid the perception that he's wasting taxpayer dollars. Like Smurfit-Stone's report, McKee's are available in PDF format on the website or in a three-ring binder.

Simpler than annual reports, brochures and newsletters are good vehicles for familiarizing executives with systems under development or technologies being explored. GSI Commerce creates brochures to raise internal awareness of the benefits of its proprietary technologies. Brochures give overviews of the system and associated processes and outline its benefits and features. A brochure promot-

ing new real-time upselling technology prompted business executives to schedule implementation of the technology with key clients sooner than originally planned—leading to a 3 percent bump in revenue. (For samples of Smurfit-Stone's IT newsletter and GSI Commerce's technology brochure, go to www.cio.com/ritlab.)

ability at 99.999 percent. But what does that missing .001 percent really mean to a businessperson? asks Meta Group's Rubin. What would be more useful to business leaders, he contends, are scores showing "the technology cost of goods." For example, in a health-care setting, the IT costs for one patient day spent in the hospital would be germane.

I don't think it's possible to overcommunicate. But I do think it's possible to overmarket. Then people see it as **self-serving.**

—JIM BURDISS, CIO, SMURFIT-STONE

KEEP SCORE

Publicizing service-level metrics and audit data is another common form of IT marketing, and scorecards are often the vehicle of choice. Global Crossing keeps a formal scorecard on the company's Web portal. Updated monthly, the scorecard tracks availability of nearly 100 core applications and gives stats on network uptime, customer service and help desk metrics, and the number of development projects delivered and their respective ROI. IT reevaluates annually what should be tracked.

The danger with scorecards, though, is that IT organizations can devote a lot of resources to reporting metrics that are meaningless to their business counterparts. An operations infrastructure scorecard might show avail-

PLAY TO WIN

Finally, we come to the most common and effective marketing tactic, according to the CIO survey—winning and publicizing IT awards. Awards confer on IT a third-party seal of approval. To avoid dimming the luster of this glow, Smurfit-Stone's Burdiss is careful not to overhype IT awards, positioning them as awards won by the entire company, not just IT.

McKee has his IS communications director, Nancy Jackson, monitor award opportunities for Washington, maintaining a calendar of application dates. Jackson looks for opportunities to showcase the state agencies' innovative uses of IT. If IS wins; it shares the spotlight with agency customers, generating goodwill and low-key PR for IS, McKee says.

Low-key or not, getting the word out about IT's value is essential. CIOs who are squeamish about marketing need to get over it—fast. "I don't think you have a choice," says Bedbury. "If you don't market yourself, someone else will." And you might not like the image you end up with. **CIO**

Learn More About Marketing IT

If you're going to succeed in running IT like a business, you've got to **toot your own horn**. Online we've gathered some very successful toots, ones you could play yourself. Check out the sample pages from Smurfit-Stone's IT annual report and internal newsletter. Also find Washington state's published IT rate card and more. Go to www.cio.com/ritlab.

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Send feedback to Senior Editor Alice Dragoon at adragoon@cio.com.



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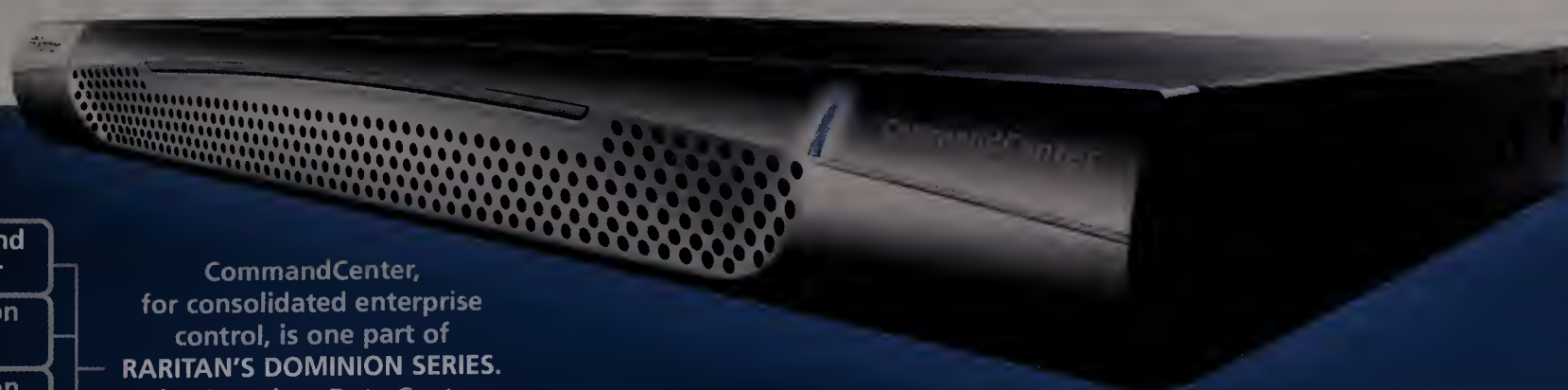
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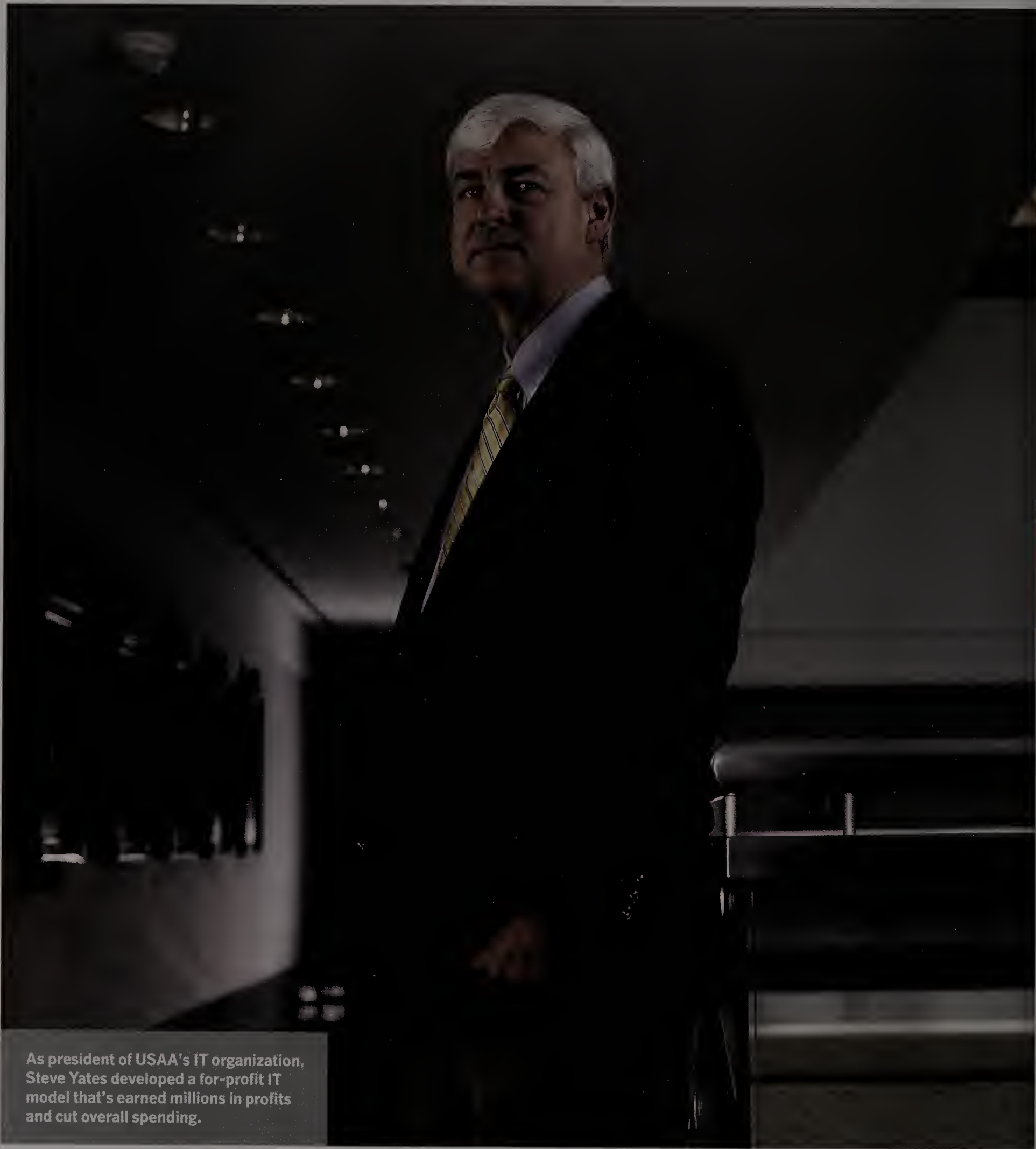
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As president of USAA's IT organization, Steve Yates developed a for-profit IT model that's earned millions in profits and cut overall spending.

IT. INCORPORATED

USAA rebuilt IT as a for-profit subsidiary, turning IT services into products and IT employees into product managers. The dividends have been great for IT... and even better for the business.

BY STEPHANIE OVERBY

Reader ROI

- How USAA restructured IT as a for-profit subsidiary
- The basics of USAA's IT product and pricing model
- Performance goals for a well-rounded IT business

On a Thursday in February, Joe Thomas arrives at his office at in USAA's San Antonio headquarters for a 7:15 a.m. meeting to review the daily status of operations. At 8 a.m., he's off to oversee an HR training session on the company's new attendance policy. He heads across the corporate campus at 9:30 to meet with a consultant regarding performance against business continuity benchmarks. Just before noon, he's back in his office with back-to-back supplier meetings. At 1:30 p.m., he's free to reply to e-mail and presumably grab a bite to eat. He goes over February's financials at 3 p.m. An hour later, he's reviewing inventory numbers with his customer, followed by a brief update on the status of his business's latest project. At 5:30, he reviews internal audit results. Just after sunset, he's heading home on the McDermott Freeway and, buoyed by the best customer satisfaction scores he's seen in some time, he's ready to do it all again tomorrow.

"I often joke that I used to be in IT," Thomas says with a giggle.

The punch line, of course, is that he's still in IT—specifically ITCO (Infor-

mation Technology Co.), the wholly owned IT subsidiary that serves financial services company USAA. But as his daily schedule illustrates, he's not managing technology, he's managing a business that supplies IT products and services to a single customer, USAA Federal Savings Bank.

Thomas, assistant vice president of bank systems, is one of four ITCO managers responsible for an IT product line associated with a specific USAA business unit. They all report to ITCO President Steve Yates, who in most companies would be called the CIO. But at the \$9.2 billion USAA, he's a chief executive, running IT with a profit and loss statement, a portfolio of 200 products and services and a contract he signs with his customer every year. He's subject to the same federal regulations as any third-party provider CEO. And his business objective is to provide the most value to USAA as efficiently as possible, something he says he could not accomplish without the transparency and credibility that come from running IT like a business. "If I didn't have this business model, I'd be deaf, dumb and blind," Yates says.

Of all the companies studied for this special report, USAA stood out for its broad commitment to and success in transforming IT into a business within a business. The evolution began in 1998, and it's hardly been smooth. Resistance from IT staff, objections by business unit leaders, corporate politics, a lack of business skills in IT—the fallout from any one of these could have brought the transformation up short.

But Yates and his team, backed by USAA's CEO, stuck with it, and their labors have yielded remarkable returns. The IT function has reported three straight years of declining costs while supporting double-digit corporate growth. Multimillion-dollar project failures have been replaced by multimillion-dollar project successes. And IT customer satisfaction scores are up 40 percent. (See "Growth Up, Spending Down," opposite page.)

Assistant VP Joe Thomas, who manages a \$60 million USAA IT "product line," encountered strong resistance from the IT rank and file when the IT business model was first introduced.



SOUL OF A NEW BUSINESS MACHINE

In the 1990s, technology drove the business rather than the other way around, says USAA COO Tim Handren, who spent nine years in IT at the company. "We got to do whatever we wanted," he recalls. "It was a dreamland for technical geeks like me." But there were major problems brewing that could be boiled down to one simple metric: USAA was growing its IT spending faster than it was growing its business. In 1998, USAA's revenue grew 5 percent while IT costs grew 10 percent. The following year, revenue was up 9 percent; IT

expenses jumped 19 percent.

At the same time, two \$100 million information technology investments were aborted over the course of a few years. "The budget was going up, and service was going down," Yates says simply. "That was the cause of a lot of consternation."

USAA's IT structure had a corporate IT shop, plus individual IT departments sitting in two lines of business. In 1998, CIO Brig. Gen. Don Walker centralized IT and dubbed it ITCO. USAA adopted a limited form of chargeback in which business units were auto-

matically assessed a percentage of IT's total yearly cost based on their relative contribution to yearly corporate revenue. If the property and casualty business accounted for 50 percent of USAA's revenue, it would be charged 50 percent of information technology costs. The chargeback model gave the businesses no control over how much they were charged, so it did nothing to encourage prudent consumption of IT resources.

In the end, running IT like a business wasn't for Walker. "He was a very brilliant technical scientist," says Yates. But new CEO Bob Davis, who took the helm in mid-1999, wanted someone with business experience in charge, and hired Yates, who had run three for-profit IT shops, most recently at Rockwell Automation. Walker moved into a position heading up technical research and a large development project, eventually leaving USAA at the end of 1999.

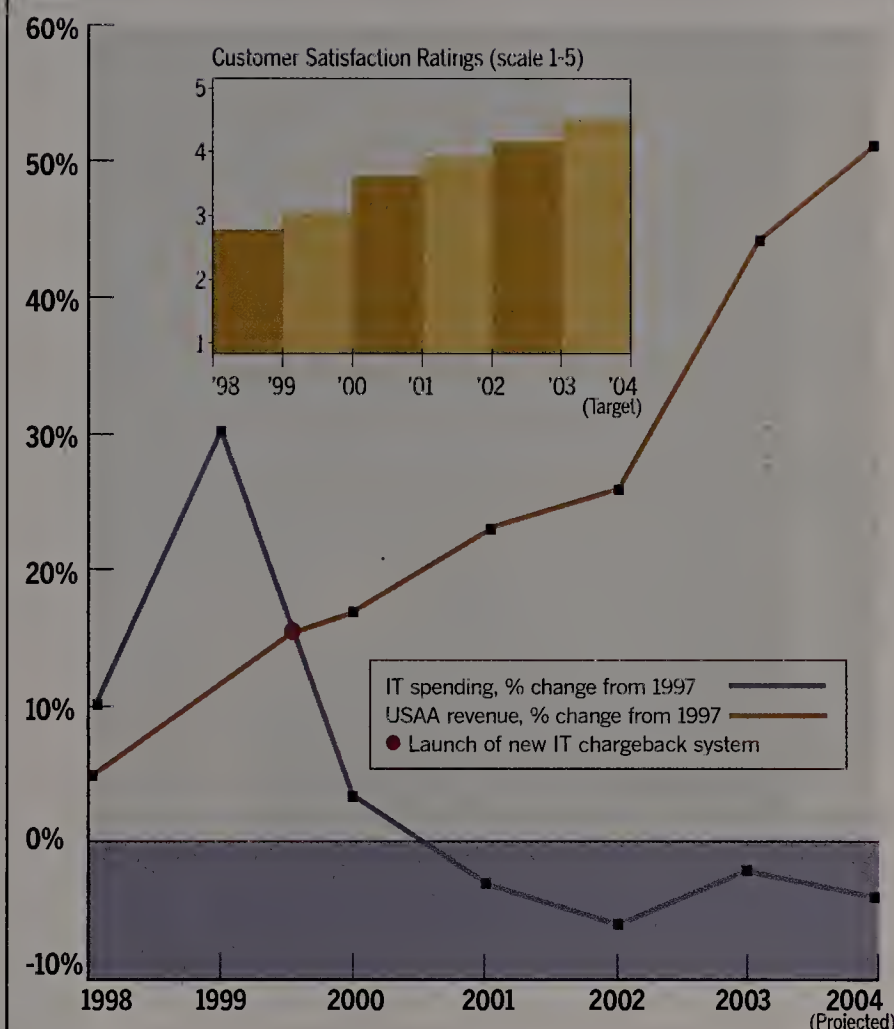
Davis set clear expectations for Yates's ITCO: "We have a responsibility to USAA members to manage this association effectively and efficiently," Davis says. "Our IT business is no exception."

Yates quickly recruited a senior financial officer for ITCO, Harmon Carswell, who had performed the same role for Yates at Brown & Root. ITCO initiated full chargeback, billing USAA and its business units for their use of all information technology products and services. "No one will take IT expenses seriously unless they see all the charges and have some control over their consumption of these services," says Yates.

And the IT business was up and running.

Growth Up, Spending Down

Running IT like a business helped reverse the trend of IT costs growing faster than company revenue, and it's kept internal customer satisfaction scores climbing steadily



THE FIRST STEPS ARE THE HARDEST

Actually, running is probably an overstatement. It was more like learning to walk, perhaps even crawl, as ITCO experienced more than a few slips along the way.

When Yates took over, the economy was still chugging along. USAA's business units showed no signs of major fiscal crisis. So the company's 2,700 IT workers didn't exactly welcome the message that they needed to make major changes. "I felt like John the Baptist preaching in the wilderness," says Yates.

Thomas, whom Yates brought to ITCO in 2000, encountered staff defiance firsthand.

"It was very hard to get people here on board. They were saying, 'First of all, who are you and why are you here? And second, why do we need to change?'" remembers Thomas. "The IT staff didn't like the implication that they were doing a poor job. And technically, they weren't." But business-oriented skills—knowledge of basic accounting and P&L—were sorely lacking.

"We started off with a major handicap. We didn't have many managers who had ever run a business," Yates explains.

Some of them had no interest in learning. "There were a lot of people who liked the title *manager*, but as a manager here, you have to understand the business side, and that wasn't what they wanted to do," says ITCO's Carswell. Some IT managers left USAA. Others were transferred to technical positions.

Yates gave his employees the tools they needed to manage the new IT shop like a business—for the first time, IT had accounting, forecasting and reporting systems. The \$4 million outlay wasn't hard

to justify. "Running IT like a business has to be an investment, not a fly-by-night thing," says Yates.

Yet in 1999, its first year of full chargeback, ITCO lost money. "We missed our rates big time. Nobody understood our cost structure, and we sure didn't know how to forecast demand," says Yates. The net loss: "many millions" is all Yates will say.

ITCO's leadership team blamed itself for the poor performance. It hadn't spent enough time training the IT ranks and getting them invested in the new business model. In 2001, that was remedied by a new ITCO effective-

ness training program. To show everyone he meant business, Yates charged his direct reports with delivering the curriculum. "I had to teach financials," says Thomas. "Another general manager had to teach customer service. Another had to explain why we were pursuing the ITCO model. It was a way of showing commitment and building trust." (For a look at the curriculum, see "IT Business 101," Page 82.)

Yates sums up the painful lesson: "You must have a business model written out that's understood not only by the IT management team but the whole group. In our case, our goal was to be the trusted IT adviser and general contractor to USAA, with a strong relationship to the business. The first time we said that, everyone just nodded." After the ITCO training, they really got it.

In year two, ITCO turned its financial numbers around. The company spent 20 percent less than planned without any major customer complaints. Except one. IT was making a profit.

CAN I.T. MAKE MONEY? AND IS THAT A GOOD THING?

The idea that IT could generate revenue was new and, to some, unsettling. The lines of business were looking at the new IT regime to cut costs. "We cut and cut and cut, and they were very pleased," says Yates. "But we started making money too. And some in the business started to say, 'You should give us that profit back. You're making money off our backs.'"

CEO Davis stepped in to defend the ITCO model. Yates recalls Davis telling the critics, "If Steve's running at a better cost structure and more efficiently, he shouldn't give you back that money. Why should we move it over to your business and make you look good? You didn't do anything to deserve it."

While Davis silenced those complaints, there are still internal mutterings that intensify when a business unit is having an off year.

IT Senior Financial Officer Harmon Carswell designed USAA's IT "product line" to make sure that everything IT sold would be easily understandable to the internal customers.



That's when the pressure mounts on Yates to explain what he's doing with the excess revenue, and why he can't cut the business units some slack by, say, offering a rebate. But ITCO sticks to its model. "It's an open and honest fair-market system, and it has to be run the same every year," Yates says.

Every July, ITCO managers develop a budget that forecasts IT costs and consumption levels. They set rates to recover those costs and break even. Any profit is a result of increased IT efficiency and controlled consumption. The goal is to come within plus or

minus 3 percent of targeted revenue, not to make a windfall by overpricing products. "Making too much profit is as bad as having a loss," Carswell says. In its four profitable years, ITCO's profit has averaged 5.5 percent of revenue, which is millions of dollars. With input from business units and corporate management, Yates recycles those profits into strategic IT investments across the business.

Eventually, both the internal IT staff and external business customers came to understand and accept the ITCO model. "People may say, 'Well, they're making money.' And

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yeah, they probably are. But that's OK," says Mark Wright, president and CEO of the USAA Federal Savings Bank business unit. "When all is said and done, with all the work being done at ITCO, it benefits us all on the bottom line."

Finally, ITCO was making progress. "It took us three years to hit our stride," estimates Yates.

THE HEART OF THE BUSINESS MODEL

Hiring an IT financial officer is one of the most effective decisions a company can make to run IT like a business, according to respondents to the CIO survey "How to Run IT Like a Business." (For more on the most effective activities, see "The Best Best Practices," Page 58.) One of Carswell's biggest contributions in that role at USAA has been the implementation of ITCO's product platform, the heart of its business model. All IT hardware, software and services have been rolled into ITCO products, 200 in all, each with its own price. And 40 ITCO managers have assumed responsibility for ITCO's wares.

To price core IT products such as phones and PCs, Carswell's team rolls up the costs of components associated with these products, such as help desk service, security and software, into a flat rate. Shared infrastructure costs for servers, mainframes and storage are

USAA Under the Hood

COMPANY

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LINE OF BUSINESS

Banking, life insurance, property and casualty insurance, and investment management

EMPLOYEES 21,000

REVENUE \$9.2 billion

ASSETS UNDER MANAGEMENT
\$71 billion

USAA Information Technology Co.

Wholly owned USAA subsidiary providing USAA with IT services

LINE OF BUSINESS

Systems for banking, life insurance, property and casualty, investment management, enterprise

EMPLOYEES 2,700

allocated to IT products oriented on business applications, such as credit card application or insurance claim processing. (For details on how ITCO transforms IT services into products that relate to its customers' business, see

"The Productization of IT" at www.cio.com/ritlab.)

With this product-based model, ITCO's customers can easily see what they're paying for and how rates track year to year. As COO Handren says, "It's much easier to understand how much it costs us to be inefficient and ineffective."

USAA's IT business model also makes budgeting simpler for the customer. If the bank unit plans to double its number of credit card accounts, it can calculate the IT costs to support that expansion. "It's a simple principle," sums up Carswell. "If I were a customer, I would want to know what my cost is, and some kind of proof through benchmarking that it is a good price."

Competitive pricing, in fact, is critical to ITCO success. "I tell my employees that the enemy is outsourcing," says Yates (although ITCO does use outsourcers itself). If they can't get that rate to where it's competitive, Yates adds, the boss and the board of directors will walk in and say, "We've had enough," and take the work elsewhere. So Yates asks his product managers, "Do you know what the rates are on the street? Are we competitive? If so, you've got excellent job security. If not, we're liable to lose the whole department."

ITCO's rates are fixed for the year, thereby shielding the business units from unexpected bumps. So product managers must account

IT's P&L Formula

For any core product line of USAA's IT business, profit or loss can be calculated this way

$$(\text{Total employee-related cost}^* \times \text{Fraction of employee-related cost allocated to product by ABC}^{**}) + (\text{Hardware and software costs directly supporting product}) - (\text{Customer volume} \times \text{Product rate}) = \text{Profit/Loss}$$

For a PC product line, the equation might look like this:

$$(\$1 \text{ million employee cost} \times 1/4 \text{ of employee cost allocated to the PC product line}) + (\$400,000 \text{ hardware and software costs}) - (2,000 \text{ PC customers} \times \$350 \text{ flat rate per PC}) = \$50,000 \text{ profit}$$

*Includes all employee- and facilities-related overhead.

**ABC = Activity-based costing, a method for calculating the "true cost" of a product or service by focusing on the actual cost of activities. ABC analysis focuses directly on cost drivers (factors that determine the cost of an activity) rather than overhead (the indirect recurring costs of running a business).

WHAT DOES IT Take TO BE THE Best

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for the system failure risks and increases in overhead costs when setting those rates. "If the business needs a new server, [the onus] is not on the business anymore; it's on the product manager," Carswell explains. "He has to know the customer and the product and make sure he has enough money to pay for this new server."

Forecasting such events has been the hardest skill for ITCO product managers to master, according to Thomas, who manages 28 IT products that generate \$60 million in annual revenue for ITCO. "IT people tend to be overly optimistic. If I tell Steve I'm going to make \$2 million next year, he'll hold me to it. He'll do things with that money," says Thomas, whose IT profits last year were invested in speech recognition technology for the bank.

Thomas learned forecasting basics from frank discussions with Carswell. He recalls, "I would tell Harmon, 'I'm going to make \$6 million this year.' He'd say, 'It's June, and you've made \$2 million, but you think you'll make \$6 million by the end of the year? What magic are you going to do?'" The dope slap had its effect, and Thomas got more realistic with his forecasts. And he had to. ITCO is self-funding; if someone messes up, Yates can't go ask the CEO for more money.

Thomas and fellow product leaders are not only charged with setting realistic costs, they must also help the bank manage its IT consumption. Recently, he went to a bank exec with a telling spreadsheet. The bank had 1.16 PCs per user, while the property and casualty business was using just .96. Thomas brainstormed with bank leaders and figured out how part-time and shift workers could share PCs and save \$2 million per year in IT costs.

SETTING BUSINESS GOALS

Yates implemented IT business practices in five key areas: customer service, operations, IT delivery, fiscal stewardship, and management and workforce. In fact, ITCO employs 41 of the 47 business practices listed on the

IT Business 101

USAA educates its IT employees on business basics so that they will understand and can even help manage IT's business within the business. USAA CEO Bob Davis liked the education concept so much that he's applying it to the larger organization. The IT staff curriculum includes training sessions in the following subjects:

- >> The ITCO business model
- >> How the IT company got started
- >> Operating in a political environment
- >> Building relationships
- >> Dealing with ambiguity
- >> Negotiating
- >> Patterns of influence
- >> Managing agreement
- >> Business basics
- >> How to compete
- >> How to treat customers
- >> Managing customer expectations
- >> Measuring service

CIO survey, plus several that weren't (to see all of ITCO's specific practices and learn which it finds most effective, see "USAA's Best-Practice Profile" at www.cio.com/ritlab).

Each December, Yates meets with his direct reports to set goals in these categories. "We get in a room and argue over them," he says. Yates's reports then take the objectives to the IT management organization, which applies them to the IT staff. "We tag everyone with some stretch target—reliability, software quality, innovation," says Yates. "Each person in this IT department has five or 10 things they can work on in their own backyard." Management bonuses are tied to achieving these objectives, while IT staffers must meet specific goals as part of their performance plans.

Among ITCO's goals for this year are:

Customer service: Earn an overall satisfaction score of at least 4.2 (on a scale of 1 to 5), improving on 2003's 4.1.

IT operations: Achieve 99.7 percent availability in operations involving "live money" (for example, actual withdrawals or stock trades), up from 99.6 percent in 2003.

IT delivery: Identify, research and champion at least one business-enhancing or enabling technology.

Fiscal stewardship: Achieve between 97 percent and 99 percent P&L forecast accuracy and 95 percent hardware inventory accuracy for desktops.

IT management: Ensure that all ITCO employees spend at least 64 hours in training.

ITCO's administration and software quality teams track more than 1,000 data points across the company to measure against these goals. A red-yellow-green coded dashboard keeps everyone informed on progress.

MARKETING I.T.—RESULTS AND ROI

USAA, like most companies in the CIO survey that achieved IT cost and value transparency, markets its IT achievements internally. Thomas gives a PowerPoint presentation to the banking unit's senior managers every November, letting them know how ITCO is performing. (For maximum effect, the presentation is timed to happen prior to the annual ITCO customer satisfaction survey.) "I go in there and say, 'Here's what we

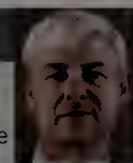
Talk to Steve Yates—and more

Steve Yates, president of ITCO, knows how to run IT like a business. Go online until May 15 to get his advice. Go to **ASK THE SOURCE**, www.cio.com/experts. Plus, there's more:

- ITCO's org chart
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The Road to the Presidency

You don't need an MBA to run IT like a business. As USAA's Steve Yates demonstrates, all it takes is some serious study at the Business School of Real Life

USAA ITCO President Steve Yates doesn't hold a Harvard MBA. He does have a master's degree in industrial engineering from the University of Alabama, where he learned a thing or two about cost accounting. And he took useful business law classes. But most of Yates's business training has been on the IT job.

His first CIO gig in 1978, at Pool Co. in Houston, had him reporting to the CFO—a blessing in disguise. His boss “was very sharp and taught me a lot about basic business and money management,” says Yates. “He was the first boss to make me set management objectives and report on them monthly.” The CFO also directed Yates to set up his first IT chargeback system in 1980.

At his next job, Yates learned when to cut bait on a business. While Yates was CIO at engineering company Ebasco Services, the company bought an IT services outfit from Boeing that made systems for power company grids. Yates absorbed this group and its commitments to customers including Duke Energy and ConEd. “We assembled all the hardware and wrote the software to deliver the whole solution,” says Yates. “But in the end, I completed all the contracts and shut down the business. We simply weren't competitive. That's why Boeing sold it to us.”

The learning experiences continued at Ebasco, where Yates



also managed an engineering group of 80 PhDs working on the Superconducting Supercollider, the world's largest nuclear particle accelerator. When the Soviet Union collapsed, the Ebasco project was cancelled. But not before Yates attached himself to another business mentor, the engineering group's salesman. “Just going with him to call on clients was like getting a master's degree in sales,” Yates says.

“He had a gift for working with people to understand what they really wanted and how to keep them happy.”

The finance and sales knowledge, combined with Yates's IT background, poised him for his next three positions, running for-profit IT departments at Brown & Root, Rockwell Automation, and finally, USAA.

His business-side colleagues are effusive about Yates's talents. “He's the best business-focused IT guy I've ever seen,” says Mark Wright, president and CEO of USAA Federal Savings Bank. USAA COO Tim Handren adds, “A lot of CIOs might understand all the technology gobbledygook and not think about the business of banking or insurance or whatever. But Steve truly puts the needs of the USAA business right out front. He's seen why IT fails in other companies. So he was able to put into practice here things that work.”

—S.O.

did for you this year,” says Thomas. “Here are our prices against benchmarks. Here's how our product rates are decreasing. Here's how I have to retrain my staff next year to meet your needs.” This is marketing based on results, not promises. (For more on how marketing helps CIOs, see “The Secret Weapon: Internal Marketing,” Page 62.)

ITCO's value has been a pleasure to market. This summer, USAA will see a \$160 million automobile and home owners' policy service system completed on time and on budget. “It's the biggest thing we've ever done, and we've been at it for two and a half years,”

Yates says. “We'll have it done about exactly when we said we would, and we're within 2 to 3 percent accuracy on the money. When you can do something that big over three years and be that accurate, that's success.”

USAA CEO Davis attributes member benefits to ITCO's financial, operational and service discipline. In 2003, the company was able to return \$668 million to members in the form of distributions, dividends and rebates. It introduced new products, and it was also able to reduce premiums on term life and auto insurance policies, and lower interest rates on credit cards, auto and home equity loans.

ITCO's business model is spreading like wildfire throughout USAA. Other internal service departments, such as corporate communications and human resources, are taking similar steps, adopting an activity-based cost model in which they bill internal customers for products and services. “Steve was the first to implement it, but the rest of the company has realized that it's a successful model,” says Handren. “Now all internal service providers here can run like a business.” **CIO**

Send feedback to Senior Writer Stephanie Overby at soverby@cio.com.

the Argument

Author **Nicholas Carr** and *CIO* Editor in Chief **Abbie Lundberg** go toe-to-toe on the strategic value of IT as a first-mover advantage

About a year ago, the *Harvard Business Review* published an article titled "IT Doesn't Matter." It ignited a vehement and often acrimonious debate over the value of information technology. Since then, Nicholas Carr, the author of the article, has expanded on his original thesis that while IT's value will increase as it becomes more standardized and ubiquitous, "the ability of any one company to use IT in a distinctive way to gain competitive advantage will diminish until...it will make more sense to manage IT as a commodity input—something that is absolutely necessary but [that] isn't going to set you apart from competitors."

Carr has faced off with detractors in print and onstage, and this month sees the publication of his new book, *Does IT Matter?* the title of which suggests Carr may have backed off his original position a bit. (He hasn't.) Carr spoke recently with *CIO* Editor in Chief Abbie Lundberg to explore his conclusions and the assumptions underlying them, one of which is that all information technology is "infrastructure." (See "The Engine that Drives Success" on Page 36 for author Don Tapscott's response to Carr.)

over it.



Author Nicholas Carr relishes his role as spoiler at the party for IT's value as a strategic resource.

CIO: Most people distinguish between infrastructure technologies and the applications that ride on them. You seem not to make that distinction.

Nicholas Carr: Over time, what we call infrastructure has expanded to incorporate much more of the hardware, everything from PCs to mainframes, and much more of the software, from fairly esoteric utility software that's been incorporated into operating systems through various application packages as well. I don't think that process is over. More and more of the IT that companies use will, over time, become viewed as infrastructure. And what isn't infrastructure continues to shrink and is meaningful to a smaller and smaller set of companies as a way to differentiate themselves.

So if you think of all of IT as a pie, what proportion of the pie falls into the infrastructure segment?

For most companies, you may as well think of it as 100 percent infrastructure and base your approach to IT management on that assumption. Ultimately, you'd want to just manage it as infrastructure, by which I mean a shared set of standardized hardware and software that is fairly homogenous across companies.

I agree with you that the greatest value from IT will come once the infrastructure is standardized, secure, reliable, interoperable, transparent. Where we differ is that I believe once we have that, there will be a lot of opportunity for differentiation and new types of business activities that are IT-

a fundamental competitive advantage. And if you're a search engine, in which your entire existence basically is those algorithms, then sure. But how widely applicable is Google's business model to other companies?

What about Amazon? It sells stuff. By leveraging the technologies it has developed on top of a common open infrastructure, the company has been able to achieve competitive advantage.

Whenever you have a new thing [like the Internet], you're going to have new companies rise up and take advantage of that new thing. So you have companies like eBay and Amazon and Google. But what's interesting to me about the Internet is how *few* companies you have like Amazon, eBay and Google.

The companies you cite in your book from 20, 30 years ago—American Airlines, American Hospital Supply, Reuters—are really the poster children of competitive advantage from that era. There weren't very many of them either.

If you look back 20 years ago, even 10 years ago, companies were able to use creative IT systems themselves as competitive barriers. From American Airlines' standpoint, it took an enormous amount of time to create Sabre, and it was horribly expensive. But because it was so difficult, it took a considerable period of time for competitors to replicate the system. And in that time in which American had a competitive advantage, based on its distinctive technology, it was able to get incredible

It's important to distinguish between what is and what isn't infrastructure. Amazon didn't differentiate by having access to the Internet. It differentiated on how it set up its shopping carts, and how it tracked customer preferences, and all of those things it built into its business model. Those are the things that gave it its distinctiveness.

Certainly, Amazon has done a lot of great stuff with Internet technology.... Amazon is an example of a company that really did gain a first-mover advantage from the Internet, as eBay did as well.

So isn't being able to leverage the right technology in the right way an important part of companies' futures?

Sure, that is an important part, and that's true of many business resources. The ability to build on that doesn't in and of itself tell you that that resource, whether it's IT or something else, is a strategic resource or not. It's a competitive necessity, but it's important not to confuse the technology, necessarily, with the source of advantage.

Are there other resources you could point to where the resource in and of itself does provide a competitive advantage?

It's very rare. One of the reasons for writing my article and my book is to underscore the danger of trying to tie competitive advantage to a particular resource rather than to a complex system of activities and resources and such.

It's been common wisdom for years that the value comes not from technology for tech-

“As IT has become cheaper and more ubiquitous, it has become harder and harder to use the technology itself as a competitive barrier because it's easier for competitors to replicate your systems.” — NICHOLAS CARR

enabled. Take Google's search algorithms, which it has developed in a specialized, proprietary way on top of the common platform of the Internet to gain a unique advantage, which it has, in fact, been able to sustain.

A fairly small subset of companies can use distinctive secret algorithms, in effect, to create

economic and business value out of that. But I would argue that as IT has become more standardized—cheaper, more ubiquitous—it has become harder and harder to use the technology itself as a competitive barrier because it becomes easier for competitors to replicate your systems.

nology's sake, but what you do with the technology—how you use it to optimize or change your business model, how you use it to transform your processes. When you talk about the erosion of competitive advantage around information technology, are you talking strictly about hardware and soft-

ware, or are you talking about those things—business processes, business models—that are enabled by IT?

I'm talking beyond just the hardware and software. When you have this increasingly standardized new business infrastructure that we call IT, even at the process level, it starts to quickly erode certain traditional advantages that companies have. Best-practice automation diffuses very quickly throughout an industry. So you can see those advantages start to erode as everyone adapts to the new infrastructure.

So why are there still such dramatic differences between one company and another? Why is it that Kmart imploded, when it's the same kind of business as Wal-Mart? Why is it that when you call L.L. Bean, you get a superior form of customer service than when you call Eddie Bauer?

It's not all technology. Wal-Mart had a fundamentally different approach to the discount retailing business in terms of where it located its stores, the type of merchandise it carried.

Having said that, certainly Wal-Mart has been an excellent user of information technology and continues to be so. My point is not that technology could never supply a competitive advantage. My point is that its ability to differentiate one company from another has diminished over time as it's become more and more standardized. Wal-Mart didn't create its technology yesterday. When it really set itself apart from competitors—in particular on the supply chain side—was back many years ago, when that technology was new. But, over time, things get routinized. Processes become standardized, and the technologies underpinning them become standardized. That ability to use technology to set yourself apart shrinks.

THE FIRST-MOVER ADVANTAGE

I just don't see that it was easier to gain competitive advantage from IT 20 or 30 years ago.

It was hard back then. It was the very difficulty of doing it that meant that your advantages tended to last a long time. The important thing about a competitive advantage is not just having one, it's how long you can hold on to it.

"Companies have to find those special things that can distinguish them from their competitors. But IT is only one place to look for those things."

—NICHOLAS CARR



And so the difficulty of innovating with IT in earlier times meant that if you did innovate successfully, you could hold on to that advantage for quite a long time. You can still innovate today. The question is, how quickly are your competitors going to be able to replicate those innovations? That competitive replication cycle has sped up and continues to speed up.

How does that play out with companies like Amazon and eBay? Their first-mover advantage has been sustained.

Right, and if you are able to use your IT advantage to leverage other advantages, then that's great. But the point is, there are millions of companies in the world. They have to ask themselves, are Amazon and eBay models that we can follow? I think very few companies can follow the eBay or the Amazon model.

But isn't the point that companies shouldn't be thinking about whom they should follow—they should be thinking about how they get advantage. What do they leverage? How do they use their resources—whether they're human or technology resources—how do they use those in a unique and strategic way to make their companies prosper?

Sure, yes. It does tend to be how you use various resources in combination distinctively.

Let's go back to Google, where you have the infrastructure that you want to be stable, reliable, low-cost, easy to manage. Then you have that distinctive asset that gives you your uniqueness.

Google's most valuable lessons to other companies are in its management of basic IT. It's a great user of commodity goods. It was very

interesting that it came out and said, We're not going to rush to buy the Titanium chip; the old stuff is good enough for us. The company obviously has an incredibly intense need for processing power and for IT sophistication, and yet it's cobbling its systems together out

innovator than if we waited and took the copycat route? The second question, and this is extremely important, is how long are we going to be able to maintain that advantage before it's replicated either directly by competitors or by vendors?

Should the CIO still be on the executive committee?

I don't believe that it's essential that it always be a C-level position. In a lot of companies, that's probably not necessary. It might make perfect sense to have the CIO report to the CFO or the

"Once we have a standardized infrastructure, there will be a lot of opportunity for differentiation and new types of business activities that are technology-enabled. Take Google's search algorithms, for example." — ABBIE LUNDBERG

of cheap, old components. That provides a great lesson to other companies in how to approach their own investments in IT. The fact that it's a search engine built on algorithms is probably less meaningful to other companies.

Certainly that distinctive, unique thing is going to be different from company to company. As far as Google's resourcefulness goes, those are the lessons of the recession. I don't know a CIO who hasn't been consolidating servers, using Linux wherever possible and renegotiating contracts with vendors. That's been going on for three years now, and it's the right thing to do, a smart thing to do. That's the way to manage the infrastructure part of your IT.

For most companies, it's all infrastructure at this point. You're right that companies have to find those special things that can distinguish them from their competitors. But IT is only one place to look for those things. For most companies, I would say it's not going to be in information technology anymore.

So is there no more place for innovation within corporate IT?

I think there will continue to be lots of innovation in corporate IT. But it will take place at the infrastructural level, it will be driven by vendors, and it will be shared.

If you look at IT innovation from an individual company's standpoint, there are two questions you have to ask. One is, how much more are we going to have to spend to be an

If companies look at those two things and find a way to reduce the extra costs that are usually involved in being an IT innovator, or to block competitors from replicating their systems, then innovation can still make sense. But at this point, those opportunities are rare. For a few companies, it'll make sense to pursue them, but it makes more sense for most companies to be followers.

THE CIO'S BURDEN

Most of the CIOs I talk with complain bitterly about having to put the bulk of their budget toward "keeping the lights on" in IT. Only a small portion is left for the things that are going to help the company be distinctive. Once companies are able to run their underlying IT cheaply, reliably, securely, isn't there an opportunity to use some of the freed-up dollars to go from "let's get this stuff to work" to "what can we really do with it?"

What can we really do with it is a very big question. Usually, those kinds of decisions are the essence of business management. It doesn't seem to me that an IT staff would make those kind of decisions.

It doesn't sound like you see much of a future for the CIO.

A lot of the most successful CIOs today are, in fact, ones who have implicitly or explicitly accepted the commoditization of IT and are focusing on how they can capitalize on that to drive down the costs and increase reliability.

COO. A lot of the hype that surrounded the CIO role during the Internet boom, particularly, was the sense that the CIO was driving strategy. The CIO had become the second-most strategic executive after the CEO. I don't think that was all that beneficial to CIOs. It created enormous expectations [about information technology] that the IT group has not been able to fulfill at a strategic level.

The CFO, who manages the commodity resource of money, is a very important person in most organizations. So even if technology's primary purpose is not to provide sustainable competitive advantage, isn't it still such an important resource that it requires C-level oversight?

For some companies it is, and for other companies it isn't. The difference with the CFO's role is that everything a company does ultimately is reduced to financial terms.

How do you finally answer the question that is the title of your book, *Does IT Matter?*

It matters enormously as an essential component of business today. You can't run a business without it. But does it matter strategically? Is it going to set your company apart from your competitors? The answer increasingly is no, and it's counterproductive at this point to think of IT in that way and to invest in IT with that kind of hope.

Let's agree to disagree. CIO



Sue Simonett
Senior Director of IS

General Mills, Inc.
Minneapolis, Minnesota

Sue Simonett has always worked in Information Systems (IS), a career she loves both for the strategic view it has afforded as well as the ability to positively impact the lives of end users.

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Michael Hawley, Director of Special Projects at MIT, has accomplished many amazing things himself – named as one of the most creative individuals in America in 2001, won the Van Cliburn piano competition in 2002, did pioneering work in digital cinema at Lucasfilm, deployed technology for the 1998 American Everest Expedition, and recently published the world's largest book of photographs, BHUTAN. Hawley says, above all, he is proudest of his students, who have in turn gone on to accomplish their own amazing things. He shares insights on his own style of leadership, inspiring innovation and applying technology to benefit business and humanity.

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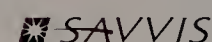
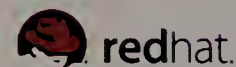
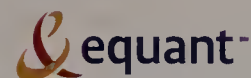
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A Longer View

BEFORE CHRISTOPHER COLUMBUS proved them wrong, 15th century seafaring captains believed the world was flat and ended at the horizon.

Their 21st century cousins—the CEO captains of industry—suffer from a similar myopic vision, one that is measured in fiscal quarters rather than horizons. Many CEOs believe and act as if the business world ends every 90 days when they close their quarterly books, says Campbell R. Harvey, the J. Paul Sticht Professor of International Business at Duke University's Fuqua School of Business. And in doing so, those CEOs are mortgaging their companies' future existence.

Harvey's report, which he coauthored with two other professors, is titled "The Economic Implications of Corporate Financial Reporting." In it, the authors review how American companies are currently managed. The report's main contention is summed up in this scathing indictment: "The majority of firms view earnings, especially earnings per share as the key metric for an outsider, even more so than cash flow. Because of



Gary J. Beach

severe market reaction to missing an earnings target, we find the firms are willing to sacrifice economic value in exchange for smooth earnings."

That last sentiment bears repeating: Companies are willing to sacrifice the long-term economic value in order to meet short-term earnings targets.

Unfortunately, CEOs who are focused so intently on quarterly earnings goals may end up creating something of a self-fulfilling prophecy. Businesses that continue to operate as if the world ends every 90 days—and focus their human and fiscal capital on pleasing Wall Street rather than pleasing customers—will eventually fall off the face of the corporate landscape.

What's it like at your company? Is your CEO one of those captains who can't see beyond that 90-day horizon? Or is your CEO a modern-day Christopher Columbus, convinced that structuring the company for the coming era of sales and market-share growth—growth that may still be hidden beyond the quarterly horizon—is the best way to sail the ship?

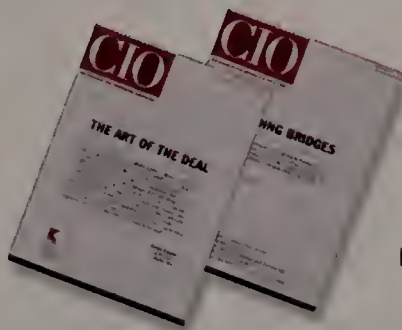
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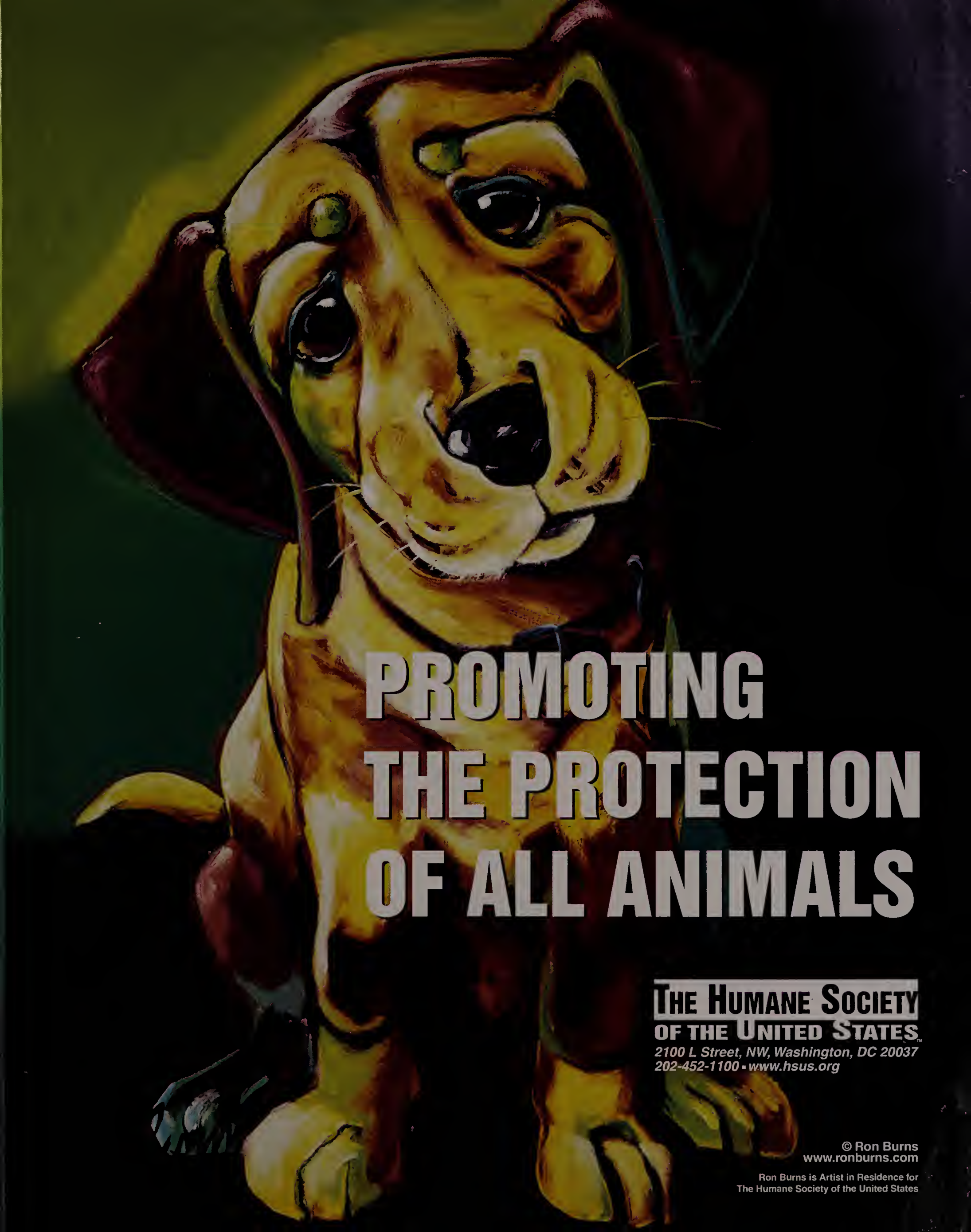
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EXECUTIVE

Summaries

May 1, 2004

SPECIAL REPORT

How to Run IT Like a Business

By Stephanie Overby | 48

The need to run IT with the discipline of a business is a mutual mandate from CEOs, CFOs and CIOs, and a concept that's come of age. For many IT leaders, this is the defining operating principle and the best way to transform a credibility-damaged cost center into the aligned, strategic business partner IT needs to be. With so much at stake, this strategy needs as much clarity as possible. Toward that end, CIO created an in-depth survey of just what it means to run IT like a business. This issue's special report draws on survey data and the personal experiences of dozens of successful CIOs to analyze what they are doing, the challenges they've overcome, and the payoffs and drawbacks. It's time-consuming to make the transformation (it can take three years to hit stride), and political hurdles abound. But those who have persevered have seen strong results: closer alignment and increased credibility with the business, improved customer service and loyalty, IT quality improvements and increased IT staff productivity.

The Best Best Practices

By Richard Pastore and Lorraine Cosgrove Ware | 58

CIOs WHO WANT TO RUN I.T. like a business must act like CEOs by planning and executing IT financial controls, marketing campaigns, HR strategies, customer service efforts and all the other disciplines that make businesses run. There are probably hundreds of discrete practices that fall into these areas; we focused on more than 40 in our survey "How to Run IT Like a Business." But a CIO doesn't have to be the master of all these practices to do a credible job and capture the benefits of business-disciplined IT: A handful of practices emerged as must-dos, common denominators to use as a foundation. And since respondents rated each practice for effectiveness and difficulty, we've been able to draw conclusions about their relative return on investment.

The Secret Weapon: Internal Marketing

By Alice Dragoon | 62

MARKETING I.T. INTERNALLY MAY STRIKE CIOs as a little too P.T. Barnum, but according to CIO's survey on how to run IT like a business, it may be the best kept secret in the CIO's bag of business tricks. Survey respondents who have attained such prized and elusive benefits as value and cost transparency, improved customer loyalty and increased IT staff productivity do as much as 25 percent more marketing than the survey's general population. These IT leaders are building thematic campaigns around IT initiatives, and they are branding projects to increase awareness and build momentum and buy-in. They are also using a range of communication vehicles—IT annual reports, brochures and product catalogs with competitive pricing benchmarks to bring the message home that IT *is* run like a business, one that brings verifiable value to the enterprise.

IT Incorporated

By Stephanie Overby | 74

IN THE LATE 1990s, USAA's IT spending was growing faster than its business. At the same time, two \$100 million IT investments were aborted. The solution for new CEO Bob Davis was to start running IT like a business. Under IT group president Steve Yates, USAA implemented full chargeback, and turned its services and technologies into 200 products, with flat rates set annually. The group runs a real P&L, with all profits reinvested in new technology development. The move met resistance from both the IT and business sides, but it has paid off for USAA, particularly in making IT costs and value transparent. Business users are better able to manage their IT consumption, which has helped achieve three successive years of IT spending reductions. USAA is also enjoying better IT project success and internal IT customer satisfaction.

The Argument Over IT |

Q&A with Nicholas Carr | 84

NICHOLAS CARR, author of the *Harvard Business Review* article that created such a stir in CIO circles last year, is about to come out with a new book. *Does IT Matter?* expands on Carr's original thesis that companies should focus their IT management strictly on cost reduction and risk mitigation and that investing in IT for differentiation or strategic advantage is futile. We at CIO believe this is dangerous advice that, taken literally, could hurt companies' competitiveness, so Editor in Chief Abbie Lundberg sat down with Carr to discuss his conclusions and the assumptions underlying them. We also invited business and technology author and consultant Don Tapscott to share his views on the topic (Page 36).

"You can't run a business without IT. But does it matter strategically? Is it going to set your company apart from your competitors? The answer increasingly is no, and it's counterproductive at this point to think of IT in that way and to invest in IT with that kind of hope."

—NICHOLAS CARR, AUTHOR,
DOES I.T. MATTER?

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